### SET-"X"

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

## (MPH/PHD/URS-EE-2020)

## **Environmental Science**

Sr. No. 10113

Code A

Fime: 1¼ Hours Roll No.	Total Quest	ions : 100	Max. Marks : 100 (in words)
Name :		_ Father's Nan	ae :
Mother's Name :		_ Date of Exam	ination:
Signature of the candida	ate)	(Sign	nature of the Invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

All questions are compulsory.

2. The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.

3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by

the candidate.

4. Question Booklet along with answer key of all the A,B,C and D code will be got uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E-Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.

5. The candidate MUST NOT do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers

MUST NOT be ticked in the Question book-let.

 There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.

7. Use only Black or Blue BALL POINT PEN of good quality in the OMR Answer-

Sheet.

8. BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.

Question No.	Ques	estions		
1.	How many ml. of 20 M NH <sub>3</sub> mus	How many ml. of 20 M NH <sub>3</sub> must be diluted to 500.0 ml. to make a 0.80 M		
	solution:			
	(1) 10 mL	(2) 20 mL		
	(3) 25 mL	(4) 80 mL		
2.	The half-life of a radioactive ma material falls to of its init	aterial is 12 years. The radioactivity of this itial value after 72 years.		
Section 1	(1) 1/6	(2) 1/8		
	(3) 1/16	(4) 1/64		
3.	Which of the following is not a s	secondary air pollutant?		
	(1) PAN	(2) O <sub>3</sub>		
	(3) SO <sub>x</sub>	(4) Acid rain		
4.	<sup>222</sup> Rn is unstable and decays by	y losing 6 neutrons and 2 protons. The final		
	decay product is	esa par		
	(1) <sup>218</sup> Bi	(2) <sup>216</sup> Bi		
	(3) <sup>214</sup> Po	(4) <sup>212</sup> Tl		
5.	The percentage of nitrogen in u	urea is		
	(1) 23.3%	(2) 22.0%		
	(3) 40.6%	(4) 46.6%		
6.	Which indicator is used in Wink	kler method titration during the estimation		
	of dissolved oxygen in water?			
		(2) Starch solution		
	(3) Methyl orange (	(4) Phenolphthalein		

Question No.	Questions
7.	Which of the following is locating agent of amino acids in Paper chromatography?
	(1) Ninhydrin (2) Methyl orange (3) Phenolphthalein (4) Brilliant green dye
8.	Electrophoresis can not be used for the separation of:  (1) Amino acids  (2) Proteins
	(3) Lipids (4) Nucleic acid
9.	SDS contains carbon atoms: (1) 6 (2) 10 (3) 12 (4) 16
10.	Which of the following pesticide contains sulphur atoms?  (1) Malathion (2) DDT  (3) 2, 4-D (4) Carbaryl
11.	In an isothermal process, the internal energy:  (1) increases  (2) decreases  (3) first increases then decreases  (4) remains constant
- 1	Wind roses typically use cardinal directions.  (1) 4 (2) 8 (3) 16 (4) 32

Question No.	Questions
13.	In which layer of the atmosphere, air is dry?
	(1) Troposphere (2) Stratosphere
	(3) Thermosphere (4) Ionosphere
14.	Which among these has maximum percentage (by volume) in dry air?
	(1) Carbon dioxide (2) Argon
	(3) Methane (4) Hydrogen
15.	Which of the following is not amongst the components of photochemical
	smog?
	(1) Unsaturated hydrocarbon (2) NO <sub>2</sub>
	(3) SO <sub>2</sub> (4) Ozone
16.	India is considered under which region in zoogeography?
	(1) Neotropical (2) Palaearctic
	(3) Ethiopian (4) Oriental
17.	Which of the following is longest mountain range?
	(1) The Andes
	(2) The Himalayas
	(3) The Ural Mountains
e , a v	(4) The Kunlun Mountains

Question No.	Questions	
18.	The correct sequence of four stages of water movement in the hydrological cycle is:	
	<ol> <li>Evaporation - Condensation - Precipitation - Infiltration</li> <li>Evaporation - Precipitation - Condensation - Infiltration</li> </ol>	
	(3) Precipitation - Evaporation - Condensation - Infiltration  (4) Precipitation - Evaporation - Infiltration - Condensation	
19.	In an ecosystem, energy flow is:  (1) Always unidirectional  (2) Always bidirectional  (3) In any direction  (4) Always down direction	
20.	The number of The Sustainable Development Goals (SDGs), adopted by a United Nations Member States in 2015 is  (1) 7 (2) 12 (3) 17 (4) 24	
21.	Food chain always starts with	
22.	Vinegar is prepared from alcohol with the help of:  (1) Lactobacillus  (2) Acetobacter  (3) Azotobacter  (4) Phints	

Question No.	Questions	
23.	The diversity of habitats over the landscape or geographical 2area is	
	known as:	
	(1) Alpha diversity (2) Beta diversity	
1	(3) Gamma diversity (4) Species diversity	
24.	Which of the following pyramid is always upright?	
	(1) Pyramid of number	
	(2) Pyramid of energy	
	(3) Pyramid of biomass	
	(4) All of the above	
25.	Which one of the following is found in tropical rainforests?	
	(1) Neem tree (2) Mahogany tree	
	(3) Teak tree (4) Sandalwood tree	
26.	Which one of the following lakes is formed due to wind action?	
	(1) Aeolian lakes (2) Shoreline lake	
	(3) Solution lake (4) Lateral lake	
27.	Siberian crane is regular visitor of which national park?	
	(1) Keoladeo national park	
	(2) Dudhwa national park	
	(3) Bandipur national park	
a.e	(4) Kanha national park	

Question No.	Questions	
28.	Law of minimum was given by:	
	(1) Shelford (2) Le	ibig
	(3) Blackman (4) Cla	ement
29.	Red Data Book is published by :	
	(1) IUCN (2) US	SEPA
e F	(3) WWF (4) IG	-BP
30.	The area where two major communiti	es meet and together is termed as
		cotype
		imber line
31.	Which one of the following is not corr	ectly matched?
	(1) Calcium - Dolomite (2) U	ranium - Pitchblende
		Iercury - Malachite
1	The amount of water vapor in the a	ir as a proportion of the maxim
32.	4 32 FL 19 10000 0000000 00 19 TH THE THE THE THE THE THE THE THE THE	A STATE OF THE STA
32.	amount the air could hold at the tem	perature is called as
32.		perature is called as  Dew point
32.	(1) Relative humidity (2) I	Heming 2 and 1
	(1) Relative humidity (2) I	Dew point  nfiltration
33.	(1) Relative humidity (2) I (3) Evaporation rate (4) I Which of the following is most abund	Dew point  nfiltration

Question No.	estion Questions	
34.	Which one of the following is correct?	
	(1) Soil organic matter (%) = 1.472 × Soil organic carbon (%)	
	(2) Soil organic matter (%) = 1.724 × Soil organic carbon (%)	
	(3) Soil organic matter (%) = 0.58 × Soil organic carbon (%)	
	(4) Soil organic matter (%) = 1.274 × Soil organic carbon (%)	
35.	The altitudinal distance of a geostationary satellite from the earth is about	
	(1) 22,000 km (2) 28,000 km	
	(3) 36,000 km (4) 42,000 km	
36.	Which of the following is correct?  (1) Refractive index of the ocean water increases with salinity  (2) Refractive index of the ocean water increases with temperature  (3) Refractive index of the ocean water decreases with salinity  (4) Refractive index of the ocean water decreases with temperature	
37.	receives rainfall from both the South-West and North-West monsoons.	
	(1) Lakshadweep Islands	
	(2) Andaman and Nicobar Islands	
	(3) Tamilnadu	
	(4) Jammu and Kashmir	

Question	Questions	
No. 38.	<ul> <li>Which of the following is not correct about Tropical cyclones?</li> <li>(1) A tropical cyclone is a rapidly rotating storm system characterized by a low-pressure</li> <li>(2) Tropical cyclones are steered primarily westward by the westerlies</li> <li>(3) Atleast 26.5 °C sea surface temperature is required for the formation of a tropical cyclone</li> <li>(4) Tropical cyclones are steered primarily westward by the Easterlies</li> </ul>	
	and the state of t	
39.	Which one of the following is the Intensity scale of the earthquake?  (1) Richter scale  (2) Mercalli scale  (3) Kelvin scale  (4) Mohs scale	
40.	Tsunami is caused by:  (1) Earthquake (2) Hurricane	
	(3) El nino (4) Land slides	
41.	The sequence of processes for production of ethanol from lignocellulos biomass is:	
	(1) Fermentation, Pre-treatment, Saccharification, Distillation	
	(2) Pre-treatment, Saccharification, Distillation, Fermentation (3) Saccharification, Distillation, Pre-treatment, Fermentation	
	(4) Pre-treatment, Saccharification, Fermentation, Distillation	

Question No.	Question	ons
42.	Which radioactive isotope is used in geological dating?	
	(1) Cobalt-60 (2)	Corbon-14
	(3) Uranium-238 (4)	Technetium-99
43.	The temperature at the inner core's surface of earth is estimated to be	
	approximately	
	(1) 2,200 K (2)	3,500 K
	(3) 4,700 K (4)	5,700 K
44.	The percentage of CO <sub>2</sub> in biogas is	
	(1) 50-65 % (2)	30-50 %
	(3) 10-20 % (4)	CO <sub>2</sub> is not present in biogas
45.	The rate of solar energy reaching	the earth surface is
	(1) 526 W (2	912 W
	(3) 1016 W (4	$2.3 \times 10^3 \mathrm{W}$
46.	Anemometer is used for the mean	sure of
	(1) Ambient temperature	
	(2) Humidity	
or I	(3) Altitude	
	(4) Wind speed	
	A STATE OF THE STA	

Question No.	Questions	
47.	Correct order of Uranium decay series is:	
	(1) Uranium → Radium → Polonium → Thorium	
	2) Uranium → Polonium → Radium → Thorium	
- 1	(3) Uranium → Radium → Thorium → Polonium	
a 6	(4) Uranium → Thorium → Radium → Polonium	
48.	Pyrolusite is an ore of:	
	(1) Uranium (2) Niobium	
	(3) Manganese (4) Titanium	
49.	Velocity of geostationary satellite with respect to earth is:	
	(1) zero (2) 1.0 m s <sup>-1</sup>	
	(3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup>	
50.	The main constituents of Liquefied Petroleum Gas (LPG) are :	
	(1) Methane + ethane	
	(2) Ethane + propane	
	(3) Propane + butane	
	(4) Butane + acetylene	
51.	As per IS 10500: 2012, Acceptable limit of nitrate (as NO <sub>3</sub> ) in drinking	
	water is:	
	(1) $15 \text{ mg/L}$ (2) $45 \text{ mg/L}$	
	(3) $55 \mathrm{mg/L}$ (4) $100 \mathrm{mg/L}$	

Question No.	Questions
52.	As per the Noise Pollution (Regulation and Control) Rules, 2000, the night time limits of noise in residential area is:
	(1) 35 dB (A) Leq (2) 45 dB (A) Leq
	(3) 55 dB (A) Leq (4) 75 dB (A) Leq
53.	According to the amount of gas dissolved in a liquid is proportional
	to its partial pressure above the liquid.
	(1) Dalton's Law
	(2) Henry's Law
	(3) Gay Lussac's Law
	(4) Raoult's Law
54.	Sulphur dioxide in ambient air is determined by :
	(1) Modified West and Gaeke Method
	(2) Jackson Candle method
	(3) Jacob and Hochheiser modified Method
*	
5	(4) Gas Phase Chemiluminescence method
55.	"Fanning" plumes are obtained under:
	(1) unstable atmosphere
	(2) neutral atmospheric conditions
	(3) super adiabatic environment
	(4) extreme inversion condition

Question No.						
56.	After 5 days of incubation at 20°C, the residual dissolved oxygen in blanks was 7.80 mg/L and in a 0.1 percent dilution of the waste was 2.30 mg/L. What is the 5-day BOD of the waste?					
	(1) 55 mg/L (2) 550 mg/L (3) 5500 mg/L (4) 55000 mg/L					
57.	How much oxygen $(O_2)$ in gm is required for complete combustion of 44g of propane ?					
NC (1)	(1) 32 g (2) 64 g (3) 82 g (4) 160 g					
58.	Turbidity of water can be determined by :					
	(1) Hydrograph					
	(2) Nephelometer					
	(3) Atomic absorption spectrophotometer					
65 E	(4) Liquid Scintillation counter					
59.	The soil order "vertisol" is related to:					
	(1) Alluvial soil (2) Red soil					
	(3) Black soil (4) Laterite soil					
60.	Which one of the following is not suitable worm species for vermicomposting?					
	(1) Eisenia fetia (2) Eudrilus eugeniae					
200	(3) Pheretima posthuman (4) Periohyx excavatus					

Question No.	Questions
61.	The groundwater of the Bangladesh is severely polluted by which heavy metal?
	(1) Lead (2) Arsenic
	(3) Cadmium (4) Mercury
62.	Which committee reviews the EIA and EMP reports of developmental projects in Ministry of Environment, Forest and Climate Change?  (1) Project Assessment Committee
	(2) Project Evaluation Committee
	(3) Environmental Clearance Committee
	(4) Environment Appraisal Committee
63.	Which of the following is not a step of EIA methodology?
	(1) Baseline study (2) Scoping
	(3) Environmental auditing (4) Screening
64.	Which of the following methodologies can not be used for assessing the impacts of any developmental activity on the environment?
	(1) Adhoc method (2) Flexible method
	(3) Overlay method (4) Matrix method
65.	The number of environmental factors listed on the vertical axis in Leopold
	Matrix to carrying out the Environmental Impact Assessment:
	(1) 22 (2) 44
	(3) 66 (4) 88

(13)

Question No.						
66.	Which one represent the Environmental Management System?					
	(1) ISO 9001	(2)	ISO 14001			
	(3) OHSAS 18001	(4)	ISO 21001			
67.	The concept of environ	mental aud	diting in industrial units in India v			
	formally introduced in w		1			
(X)	(1) 1974	(2)	) 1981			
•	(3) 1992	(4)	2006			
68.	In EIA, Three overlappi	ng phases :	: identification, prediction and evaluat			
*	belong to:					
	(1) Impact Analysis	(2)	) Decision making			
	(3) Reporting	(4)	) Review			
69.			on Sustainable Development (CSD)			
β. Δ.			ssembly in which year?			
	(1) 1992	(2)	) 1999			
	(3) 2016	(4)	2020			
70.	According to Solid Wast	e Managem	nent Rules, 2016, Special Economic Zo			
1	(DEZ) to earmark at lea	ast o	of the total area of the plot for recov			
	and recycling facility.		*** V			
	and recycling facility. (1) 1%	(2)				

Question No.	Questions
71.	Which of the following is excluded from the scope of Basel convention?
	(1) Radioactive waste
- 2	(2) Clinical waste
***	(3) Waste of explosive nature
	(4) Waste oils/water, hydrocarbons/water mixtures, emulsions
72.	Which one of the following is not a characteristics of hazardous waste?
	(1) Corrosivity (2) Toxicity
	(3) Ignitability (4) Biodegradability
73.	For the collection of Anatomical waste colour plastic bags are used.
	(1) Red (2) Black
	(3) Yellow (4) White
74.	If plastics are burnt in incinerator at low temperature then which of the following gases are produced?
	(1) Phosphine (2) Dioxins and furans
	(3) Radon (4) Acetylene gas
75.	The calorific value of solid waste can be determined experimentally
	using
	(1) UV-Vis Spectrophotometer
	(2) ICP-MS
**	(3) Bomb calorimeter
	(4) Flame photometer
7)	

Question No.	Questions						
76.	Which of the following scale is used to determine the hardness of the solid waste?						
	(1) Moh's scale (2) Kelvin's scale (3) Avogadro's scale (4) Dobson's scale						
77.	Incineration process is done at a temperature of						
	(1) 60-100 °C (2) 350-500 °C (3) 850-1100 °C (4) 1500-2000 °C						
78.	Which one of the following is not a Composting method?  (1) NADEP method  (2) Bangalore method  (3) Mangalore Method  (4) Indore method						
79.	is used as a natural liner in landfills.						
	(1) Clay (2) HDPE (3) Silt (4) Gravel						
80.	<ul> <li>Which of the following is not correct about Lotka - Volterra model?</li> <li>(1) Deals with predator-pray interactions</li> <li>(2) It has a pair of second-order linear differential equations</li> <li>(3) This model assumes that the prey population finds ample food a all times</li> </ul>						
	(4) This model assumes that predators have limitless appetite						

Questio No.	Questions					
81.	If the Arithmetic mean of a set of two observations is 9 and its Geometric mean is 6. Then the Harmonic mean of the set of observations is :					
	(1) 2 (2) 4 (3) 15 (4) 54					
82.	Gaussian Plume model is about:					
	(1) Microorganism growth (2) Risk assessment					
	(3) Predator-prey interactions (4) Air pollution dispersion					
83.	Chi-square curve ranges from :  (1) $-\infty$ to $+\infty$ (2) $-\infty$ to 0					
	(3) 0 to ∞ (4) 0 to 1					
84.	Mode of the series 0, 0, 0, 2, 2, 3, 3, 8, 10 is:					
	(1) 0 (2) 2					
	(3) 3 (4) 10					
85.	The midpoint of the values after they have been ordered from the smalles to the largest or the largest to the smallest is called:					
	(1) Mean (2) Median					
	(3) Lower quartile (4) Upper quartile					

Questic No.	Questions
86.	The probability of an event cannot be:
	(1) 0.3 (2) 0.5
	(3) -0.5 (4) 1.0
87.	What is the Median of the following set of scores? 3, 6, 9, 4, 7, 2, 8:
	(1) 3 (2) 4
	(3) 6 (4) 9
88.	If all frequencies of classes are same, the value of Chi-square is
	(1) Zero (2) One
2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(3) Infinity (4) Can not be predicted
	(2) Gamma radiation (3) UV radiations (4) Microwave radiations
90.	Sardar Sarovar Dam is built on which river?
,00	(1) Krishna river (2) Cauvery river
	(3) Narmada river (4) Bhagirathi river
91.	Which of the following is a Pozzolana, material?
	(1) Cement (2) Flyash
- 1	3) River sand (4) Activated sludge
H/PH	D/URS-EE-2020 (Environmental Science) Code-A

Question No.	Questions					
92.	What are Bharat Stage VI (BS VI) standards?					
	(1) Drinking water standards					
	(2) Ambient air quality standards					
7	(3) Emission standard from vehicles					
	(4) Emission standard from brick kilns					
93.	Which gland of human body is affected by Iodine deficiency?					
	(1) Pituitary gland (2) Pineal gland					
	(3) Hypothalamus (4) Thyroid gland					
94.	The octane number of iso-octane is?					
(54) 20 21 - 14 (4) 21 - 17 (2)	(1) 0 (2) 1					
	(3) 10 (4) 100					
95.	Photolysis of NO <sub>2</sub> occurs due to the radiations of which wavelength?					
	$(1) < 390  \text{nm} \qquad (2)  400 - 450  \text{nm}$					
	(3) $500 - 574 \mathrm{nm}$ (4) $> 574 \mathrm{nm}$					
96.	Which of the following has maximum tendency to combine with					
	haemoglobin?					
	(1) CO (2) NO <sub>X</sub>					
	(3) SOx (4) Pb					

Question No.				Ques		Name and Address of the Owner, where the Party of the Owner, where the Party of the Owner, where the Owner, which is the Owner, where the Owner, which is the Own				
97.	Which of the following is not a criteria air pollutant?									
	200727	CO	9 2	4	(2)	CO				(II) 22 74
r k j sv	(3)	Pb			(4)	O <sub>3</sub>		ممنحين		·
98.	Eff	iciency of pr	imary p	roductio	n ir	an ocean	s	<b>_:</b> ·		
	(1)	0.02 %	v 2		(2)	0.2 %	bes f			
	(3)	2 %			(4)	20 %				
99.	Wa	stewater de	tention	time in G	irit	chamber is	ı:	6.	*	
	(1)	2 minutes	9 5 9		(2)	2 hours		8		
	(3)	8 hours			(4)	2 days			*	
100.	In v	vhich seasor	ı is the	ozone fou	ınd	at its max	mum	level	in the	northe
		isphere?			(.i., 1.	0.53 M.	14			•
	1	erprore .				10000	- 77			
	(1)	Winter			(2)	Spring	3. 3.			
	a et a	Winter	*****			Spring Autumn				a
	(1)	Winter	** <u>***********************************</u>							
	(1)	Winter								
	(1)	Winter								
	(1)	Winter								
	(1)	Winter								
	(1)	Winter								
	(1)	Winter								
	(1)	Winter								

(DO NOT OPEN THIS QUESTION BOOKLI BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

## (MPH/PHD/URS-EE-2020)

# **Environmental Science**



10114

Time: 1¼ Hours	<b>Total Quest</b>	ions : 100	Max. Marks : 100
Roll No	_ (in figure)		(in words)
Name:		_ Father's Name	e:
Mother's Name :		Date of Exami	nation:
(Signature of the candidate	a)	(Signa	ature of the Invigilator)

### CANDIDATES MUST READ THE FOLLOWING INFORMATION/ INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

- All questions are compulsory.
- The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
- Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
- Question Booklet along with answer key of all the A,B,C and D code will be got uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E-Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.
- The candidate MUST NOT do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers MUST NOT be ticked in the Question book-let.
- There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
- Use only Black or Blue BALL POINT PEN of good quality in the OMR Answer-7. Sheet.
- BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD 8. ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.

Question No.	Questions
1.	Which of the following is excluded from the scope of Basel convention?
a 2	(1) Radioactive waste
	(2) Clinical waste
	(3) Waste of explosive nature
	(4) Waste oils/water, hydrocarbons/water mixtures, emulsions
2.	Which one of the following is not a characteristics of hazardous waste?
	(1) Corrosivity (2) Toxicity
	(3) Ignitability (4) Biodegradability
3.	For the collection of Anatomical waste colour plastic bags are used
	(1) Red (2) Black
	(3) Yellow (4) White
4.	If plastics are burnt in incinerator at low temperature then which of the following gases are produced?
	(1) Phosphine (2) Dioxins and furans
	(3) Radon (4) Acetylene gas
5.	The calorific value of solid waste can be determined experimentall
- 1	using
	(1) UV-Vis Spectrophotometer
	(2) ICP-MS
1	(3) Bomb calorimeter
	(4) Flame photometer

Question No.		Questions					
6.	Which of the following scale is used to determine the hardness of the solid waste?						
	(1) Moh's scale	(2) Kelvin's scale					
	(3) Avegadro's scale	(4) Bobson's scale					
7.	Incineration process is don	e at a temperature of					
	(1) 60-100°C	(2) 350-500 °C					
	(3) 850-1100°C	(4) 1500 – 2000 °C					
8.	Which one of the following	is not a Composting method?					
	(1) NADEP method	(2) Bangalore method					
	(3) Mangalore Method	(4) Indore method					
9.	is used as a natural liner in landfills.						
	(1) Clay	(2) HDPE					
	(3) Silt	(4) Gravel					
10.	Which of the following is no	ot correct about Lotka – Volterra model ?					
	(1) Deals with predator-pr						
		order linear differential equations					
		hat the prey population finds ample food a					
	(4) This model assumes th	at predators have limitless appetite					

Question No.					
11.	As per IS 10500 : 2012, Acceptable limit of nitrate (as NO <sub>3</sub> ) in drinking water is :				
	(1) 15 mg/L (2) 45 mg/L				
	(3) 55 mg/L (4) 100 mg/L				
12.	As per the Noise Pollution (Regulation and Control) Rules, 2000, the night time limits of noise in residential area is:				
	(1) 35 dB (A) Leq (2) 45 dB (A) Leq				
	(3) 55 dB (A) Leq (4) 75 dB (A) Leq				
13.	According to the amount of gas dissolved in a liquid is proportional to its partial pressure above the liquid.  (1) Dalton's Law  (2) Henry's Law  (3) Gay Lussac's Law  (4) Raoult's Law				
14.	Sulphur dioxide in ambient air is determined by:  (1) Modified West and Gaeke Method  (2) Jackson Candle method				
	(3) Jacob and Hochheiser modified Method				
1	(4) Gas Phase Chemiluminescence method				

Questio No.	Questions			
15. "Fanning" plumes are obtained under:				
	(1) unstable atmosphere			
	(2) neutral atmospheric conditions			
	(3) super adiabatic environment			
2	(4) extreme inversion condition			
16.	After 5 days of incubation at 20°C, the residual dissolved oxygen in blank was 7.80 mg/L and in a 0.1 percent dilution of the waste was 2.30 mg/L What is the 5-day BOD of the waste?			
	(1) 55 mg/L (2) 550 mg/L			
	(3) 5500 mg/L (4) 55000 mg/L			
	(1) 32 g (2) 64 g (3) 82 g (4) 160 g			
18.	Turbidity of water can be determined by :			
	(1) Hydrograph			
	(2) Nephelometer			
	(3) Atomic absorption spectrophotometer			
	(4) Liquid Scintillation counter			
9.	The soil order "vertisol" is related to			
1	1) Allemial and			
1	3) Black soil (4) Laterite soil			
19.	(3) Atomic absorption spectrophotometer (4) Liquid Scintillation counter  The soil order "vertisol" is related to:  1) Alluvial soil (2) Red soil			

Question No.	Questions
20.	Which one of the following is not suitable worm species for vermicomposting?
2 F	(1) Eisenia fetia (2) Eudrilus eugeniae
3 8	(3) Pheretima posthuman (4) Periohyx excavatus
21.	Which one of the following is not correctly matched?
	(1) Calcium - Dolomite (2) Uranium - Pitchblende
	(3) Lead - Galena (4) Mercury - Malachite
22.	The amount of water vapor in the air as a proportion of the maximum amount the air could hold at the temperature is called as
	(1) Relative humidity (2) Dew point
	(3) Evaporation rate (4) Infiltration
23.	Which of the following is most abundant natural acid?
	(1) Hydrochloric acid (2) Phosphoric acid
	(3) Carbonic acid (4) Nitric acid
24.	Which one of the following is correct?
	(1) Soil organic matter (%) = 1.472 × Soil organic carbon (%)
	(2) Soil organic matter (%) = 1.724 × Soil organic carbon (%)
	(3) Soil organic matter (%) = 0.58 × Soil organic carbon (%)
- 4	

Question No.	Questions
25.	The altitudinal distance of a geostationary satellite from the earth is
	about
	(1) 22,000 km (2) 28,000 km
	(3) 36,000 km (4) 42,000 km
26.	Which of the following is correct?
	(1) Refractive index of the ocean water increases with salinity
	(2) Refractive index of the ocean water increases with temperature
	(3) Refractive index of the ocean water decreases with salinity
	(4) Refractive index of the ocean water decreases with temperature
27.	receives rainfall from both the South-West and North-West
	monsoons.
	(1) Lakshadweep Islands
	(2) Andaman and Nicobar Islands
	(3) Tamilnadu
	(4) Jammu and Kashmir
28.	Which of the following is not correct about Tropical cyclones?
[	(1) A tropical cyclone is a rapidly rotating storm system characterized by
	a low-pressure
	(2) Tropical cyclones are steered primarily westward by the westerlies
	(3) Atleast 26.5 °C sea surface temperature is required for the formation
	of a tropical cyclone
	(4) Tropical cyclones are steered primarily westward by the Easterlies

Question No.	Questions
29.	Which one of the following is the Intensity scale of the earthquake?  (1) Richter scale  (2) Mercalli scale  (3) Kelvin scale  (4) Mohs scale
30.	Tsunami is caused by:  (1) Earthquake (2) Hurricane  (3) El nino (4) Land slides
31.	In an isothermal process, the internal energy:  (1) increases  (2) decreases  (3) first increases then decreases  (4) remains constant
32.	Wind roses typically use cardinal directions. (1) 4 (2) 8 (3) 16 (4) 32
33.	In which layer of the atmosphere, air is dry?  (1) Troposphere  (2) Stratosphere  (3) Thermosphere  (4) Ionosphere
34.	Which among these has maximum percentage (by volume) in dry air?  (1) Carbon dioxide (2) Argon  (3) Methane (4) Hydrogen

Question No.	
35.	Which of the following is not amongst the components of photochemical
	smog?
	(1) Unsaturated hydrocarbon (2) NO <sub>2</sub>
	(3) SO <sub>2</sub> (4) Ozone
36.	India is considered under which region in zoogeography?
	(1) Neotropical (2) Palaearctic
	(3) Ethiopian (4) Oriental
	<ul> <li>(1) The Andes</li> <li>(2) The Himalayas</li> <li>(3) The Ural Mountains</li> <li>(4) The Kunlun Mountains</li> </ul>
38.	The correct sequence of four stages of water movement in the hydrological cycle is:
	(1) Evaporation - Condensation - Precipitation - Infiltration
	(2) Evaporation - Precipitation - Condensation - Infiltration
	(3) Precipitation - Evaporation - Condensation - Infiltration
	(4) Precipitation - Evaporation - Infiltration - Condensation

Question No.	Questions
39.	In an ecosystem, energy flow is:  (1) Always unidirectional  (2) Always bidirectional  (3) In any direction  (4) Always down direction
40.	The number of The Sustainable Development Goals (SDGs), adopted by all United Nations Member States in 2015 is  (1) 7 (2) 12 (3) 17 (4) 24
41.	Which of the following is a Pozzolana, material?  (1) Cement (2) Fly ash  (3) River sand (4) Activated sludge
42.	What are Bharat Stage VI (BS VI) standards?  (1) Drinking water standards  (2) Ambient air quality standards  (3) Emission standard from vehicles  (4) Emission standard from brick kilns
43.	Which gland of human body is affected by Iodine deficiency?  (1) Pituitary gland  (2) Pineal gland  (3) Hypothalamus  (4) Thyroid gland

Question	Questions
44.	The octane number of iso-octane is?
1.	(1) 0 (2) 1
	(3) 10 (4) 100
45.	Photolysis of NO <sub>2</sub> occurs due to the radiations of which wavelength?
	(1) <390 nm (2) 400 – 450 nm
	(3) $500 - 574 \mathrm{nm}$ (4) $> 574 \mathrm{nm}$
46.	Which of the following has maximum tendency to combine with
	haemeglobin?
	(1) CO (2) NOx
	(3) SOx (4) Pb
47.	Which of the following is not a criteria air pollutant?
1	(1) CO (2) CO <sub>2</sub>
	(3) Pb (4) O <sub>3</sub>
48.	Efficiency of primary production in an ocean is:
	(1) 0.02% (2) 0.2%
	(3) 2% (4) 20%
49.	Wastewater detention time in Grit chamber is:
- 1	(1) 2 minutes (2) 2 hours
	(3) 8 hours (4) 2 days
PH/P	HD/URS-EE-2020 (Environmental Science) Code-B

Question No.	Questions
50.	In which season is the ozone found at its maximum level in the northern hemisphere?  (1) Winter  (2) Spring  (3) Summer  (4) Autumn
51.	The groundwater of the Bangladesh is severely polluted by which heavy metal?  (1) Lead (2) Arsenic (3) Cadmium (4) Mercury
52.	Which committee reviews the EIA and EMP reports of developmental projects in Ministry of Environment, Forest and Climate Change?  (1) Project Assessment Committee  (2) Project Evaluation Committee  (3) Environmental Clearance Committee  (4) Environment Appraisal Committee
53.	Which of the following is not a step of EIA methodology?  (1) Baseline study  (2) Scoping  (3) Environmental auditing  (4) Screening
	Which of the following methodologies can not be used for assessing the impacts of any developmental activity on the environment?  (1) Adhoc method  (2) Flexible method  (3) Overlay method  (4) Matrix method

Question No.					
55.	The number of environmental factors listed on the vertical axis in Leopold				
	Matrix to carrying out the Environmental Impact Assessment:				
	(1) 22 (2) 44				
	(3) 66 (4) 88				
56.	Which one represent the Environmental Management System?				
	(1) ISO 9001 (2) ISO 14001				
	(3) OHSAS 18001 (4) ISO 21001				
57.	The concept of environmental auditing in industrial units in India w				
	formally introduced in which year?				
	(1) 1974 (2) 1981				
	(3) 1992 (4) 2006				
58.	In FIA, Three overlapping phases: identification, prediction and evaluation				
	belong to:				
	(1) Impact Analysis (2) Decision making				
	(3) Reporting (4) Review				
59.	The United Nations Commission on Sustainable Development (CSD) wa				
	established by the UN General Assembly in which year?				
	established by the ON General Assembly in which year?				
	(1) 1992 (2) 1999				

Question No.	Questions
60.	According to Solid Waste Management Rules, 2016, Special Economic Zones (SEZ) to earmark at least of the total area of the plot for recovery and recycling facility.
	(1) 1% (2) 2%
	(3) 3% (4) 5%
61.	If the Arithmetic mean of a set of two observations is 9 and its Geometric mean is 6. Then the Harmonic mean of the set of observations is :
	(1) 2 (2) 4
	(3) 15 (4) 54
62.	Gaussian Plume model is about: (1) Microorganism growth
1	(2) Risk assessment
	(3) Predator-prey interactions
	(4) Air pollution dispersion
63.	Chi-square curve ranges from:
. [	$(1) -\infty t + \infty \qquad (2) -\infty t = 0$
	(3) 0 to ∞ (4) 0 to 1
64.	Mode of the series 0, 0, 0, 2, 2, 3, 3, 8, 10 is:
	(1) 0 (2) 2
	(3) 3 (4) 10

the largest or the larges  Mean  Lower quartile  pe probability of an event  0.3  -0.5	(2) 0.5 (4) 1.0
the largest or the larges  Mean  Lower quartile  pe probability of an event  0.3  -0.5	t to the smallest is called:  (2) Median  (4) Upper quartile  cannot be:  (2) 0.5  (4) 1.0
Lower quartile  ne probability of an event  0.3  -0.5	(4) Upper quartile cannot be: (2) 0.5 (4) 1.0
ne probability of an event  0.3  -0.5	(2) 0.5 (4) 1.0
) 0.3 ) -0.5	(2) 0.5 (4) 1.0
) -0.5	(4) 1.0
0.57,00.01	
hat is the Median of the	
	following set of scores ? 3, 6, 9, 4, 7, 2, 8:
) 3	(2) 4
) 6	(4) 9
all frequencies of classes	are same, the value of Chi-square is:
	(2) One
Infinity	(4) Can not be predicted
hich of the following radia	ations has maximum energy?
	, , , , , , , , , , , , , , , , , , ,
Gamma radiation	
UV radiations	
Microwave radiations	
rdar Sarovar Dam is buil	t on which river?
Krishna river	(2) Cauvery river
Narmada river	(4) Bhagirathi river
	all frequencies of classes Zero Infinity hich of the following radiations Gamma radiation UV radiations Microwave radiations rdar Sarovar Dam is built Krishna river

Question No.		Questions
71.	The sequence of processe	es for production of ethanol from lignocellulosic
	biomass is:	
- 19	(1) Fermentation, Pre-tr	reatment, Saccharification, Distillation
		narification, Distillation, Fermentation
	(3) Saccharification, Dis	tillation, Pre-treatment, Fermentation
	(4) Pre-treatment, Sacch	narification, Fermentation, Distillation
72.	Which radioactive isotope	e is used in geological dating?
	(1) Cobalt-60	(2) Corbon-14
	(3) Uranium-238	(4) Technetium-99
73.	The temperature at the	inner core's surface of earth is estimated to be
1	approximately	The second of the modern party and the second of the secon
	(1) 2,200 K	(2) 3,500 K
	(3) 4,700 K	(4) 5,700 K
74.	The percentage of CO <sub>2</sub> in	biogas is :
	(1) 50-65 %	(2) 30-50 %
	(3) 10-20 %	(4) CO <sub>2</sub> is not present in biogas
75.	The rate of solar energy r	eaching the earth surface is
	(1) 526 W	(2) 912 W
. ]	(3) 1016 W	(4) $2.3 \times 10^3 \mathrm{W}$

Question No.	Questions
76.	Anemometer is used for the measure of
	(1) Ambient temperature
	(2) Humidity
	(3) Altitude
	(4) Wind speed
77.	Correct order of Uranium decay series is:
	(1) Uranium → Radium → Polonium → Thorium
	(2) Uranium → Polonium → Radium → Thorium
	(3) Uranium → Radium → Thorium → Polonium
	(4) Uranium → Thorium → Radium → Polonium
78.	Pyrolusite is an ore of:
	(1) Uranium (2) Niobium
	(3) Manganese (4) Titanium
79.	Velocity of geostationary satellite with respect to earth is:
	(1) zero (2) 1.0 m s <sup>-1</sup>
	(3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup>
80.	The main constituents of Liquefied Petroleum Gas (LPG) are :
	(1) Methane + ethane (2) Ethane + propane
	(3) Propane + butane (4) Butane + acetylene

020 (Environmental Science) Code-B
(16)

Question No.	Questions
81.	Food chain always starts with
_ =	(1) Photosynthesis (2) Respiration
	(3) Transpiration (4) Denitrification
82.	Vinegar is prepared from alcohol with the help of:
	(1) Lactobacillus (2) Acetobacter
	(3) Azotobacter (4) Rhizobium
83.	The diversity of habitats over the landscape or geographical 2area is
	known as:
I	(1) Alpha diversity (2) Beta diversity
	(3) Gamma diversity (4) Species diversity
84.	Which of the following pyramid is always upright?
	(1) Pyramid of number
	(2) Pyramid of energy
	(3) Pyramid of biomass
	(4) All of the above
85.	Which one of the following is found in tropical rainforests?
QI .	(1) Neem tree (2) Mahogany tree
	(3) Teak tree (4) Sandalwood tree

MPH/PHD/URS-EE-2020 (Environmental Science) Code-B
(17)

Question No.	Questions	3
86.	Which one of the following lakes is fo	rmed due to wind action?
		horeline lake
	(3) Solution lake (4) I	ateral lake
87.	Siberian crane is regular visitor of w	nich national park?
	(1) Keoladeo national park	
	(2) Dudhwa national park	
	(3) Bandipur national park	
	(4) Kanha national purk	
88.	Law of minimum was given by:	
	(1) Shelford (2) I	eibig
	(3) Blackman (4) (	Clement
89.	Red Data Book is published by:	
	(1) IUCN (2) 1	USEPA
	(3) WWF (4) 1	G-BP
90.	The area where two major communi	ties meet and together is termed as :
	(1) Ecads (2)	Ecotype
	A STATE OF THE STA	Timber line
91.	How many ml. of 20 M NH <sub>3</sub> must be	diluted to 500.0 ml. to make a 0.80 M
	solution:	mi. to make a 0.80 M
	(1) 10 mL (2)	20 mL
	(3) 25 mL (4)	80 mL

MPH/PHD/URS-EE-2020 (Environmental Science) Code-B
(18)

Question No.	Q	nestic	ons
92.			ial is 12 years. The radioactivity of this
	material falls to of its	-2.81	1
	(1) 1/6	(2)	1/8
	(3) 1/16	(4)	1/64
93.	Which of the following is not	a seco	endary air pollutant?
	(1) PAN	(2)	O <sub>3</sub>
	(3) SO <sub>x</sub>	(4)	Acid rain
94.	<sup>222</sup> Rn is unstable and decays decay product is	by los	ing 6 neutrons and 2 protons. The final
		(Õ)	216 <b>B</b> i
Ī	(I) <sup>218</sup> Bi	(2)	
	(3) <sup>214</sup> Po	(4)	21811
95.	The percentage of nitrogen	n urea	is
	(1) 23.3%	(2)	22.0%
	(3) 40.6%	(4)	46.6%
96.	Which indicator is used in W		method titration during the estimation
	of dissolved oxygen in water	?	Carrier and Carrie
	(1) Potassium chromate	(2)	Starch solution
	(3) Methyl orange	(4)	Phenolphthalein
97.	Which of the following is chromatography?	locat	ing agent of amino acids in Paper
	(1) Ninhydrin	(2)	Methyl orange
	(3) Phenolphthalein	(4)	Brilliant green dye

MPH/PHD/URS-ÉÉ-2020 (Environmental Science) Code-B

Question No.	Questions
98.	Electrophoresis can not be used for the separation of:
	(1) Amino acids (2) Proteins
	(3) Lipids (4) Nucleic acid
99.	SDS contains carbon atoms :
	(1) 6 (2) 10 (3) 12 (4) 16
100.	Which of the following pesticide contains sulphur atoms?
	(1) Malathion (2) DDT
185	(3) 2, 4-D (4) Carbaryl
•	
2	
MPHA	PHD/URS-EE-good (E

-EE-2020 (Environmental Science) Code-B

#### SET-"X"

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

#### (MPH/PHD/URS-EE-2020)

## **Environmental Science**

10115

Code



Fime: 1¼ Hours	Total Quest	tions: 100	Max. Marks : 100
Roll No	(in figure)		(in words)
Name :		_ Father's Name:	
Mother's Name :		_ Date of Examina	tion :

(Signature of the candidate)

(Signature of the Invigilator)

Sr. No.

CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

- All questions are compulsory.
- 2. The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
- 3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
- 4. Question Booklet along with answer key of all the A,B,C and D code will be got uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E-Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.
- The candidate MUST NOT do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers MUST NOT be ticked in the Question book-let.
- There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
- 7. Use only Black or Blue <u>BALL POINT PEN</u> of good quality in the OMR Answer-Sheet.
- 8. BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.

<b>.</b>	4:	မှ	'n		No.
<ul> <li>The rate of solar energy reaching the earth surface is</li></ul>	The percentage of CO <sub>2</sub> in biogas is:  (1) 50-65%  (2) 30-50%  (3) 10-20%  (4) CO <sub>2</sub> is not present in biogas	The temperature at the inner core's surface of earth is estimated to be approximately  (1) 2,200 K  (2) 3,500 K  (3) 4,700 K  (4) 5,700 K	Which radioactive isotope is used in geological dating?  (1) Cobalt-60  (2) Corbon-14  (3) Uranium-238  (4) Technetium-99	<ol> <li>Fermentation, Pre-treatment, Saccharification, Distillation</li> <li>Pre-treatment, Saccharification, Distillation, Fermentation</li> <li>Saccharification, Distillation, Pre-treatment, Fermentation</li> <li>Pre-treatment, Saccharification, Fermentation, Distillation</li> </ol>	The sequence of processes for production of ethanol from lignocellulosic biomass is:

6. Anemometer is used for the measure of	No.	Questions
<ol> <li>(1) Ambient temperature</li> <li>(2) Humidity</li> <li>(3) Altitude</li> <li>(4) Wind speed</li> <li>Correct order of Uranium decay series is:         <ol> <li>(1) Uranium → Radium → Polonium → Thorium</li> <li>(2) Uranium → Radium → Fhorium → Thorium</li> <li>(3) Uranium → Thorium → Radium → Polonium</li> <li>(4) Uranium → Thorium → Radium → Polonium</li> </ol> </li> <li>Pyrolusite is an ore of:         <ol> <li>(1) Uranium</li> <li>(2) Niobium</li> <li>(3) Manganese</li> <li>(4) Titanium</li> <li>(3) Manganese</li> <li>(4) Titanium</li> <li>(1) zero</li> <li>(2) 1.0 m s<sup>-1</sup></li> <li>(3) 10 m s<sup>-1</sup></li> <li>(4) 15 m s<sup>-1</sup></li> </ol> </li> <li>The main constituents of Liquefied Petroleum Gas (LPG (1) Methane + ethane</li> <li>(2) Ethane + propane</li> <li>(3) Propane + butane</li> <li>(4) Butane + acetylene</li> </ol>	စ္	Anemometer is used for the measure of
(2) Humidity (3) Altitude (4) Wind speed  Correct order of Uranium decay series is: (1) Uranium → Radium → Polonium → Thorium (2) Uranium → Radium → Thorium → Thorium (3) Uranium → Thorium → Radium → Polonium (4) Uranium → Thorium → Radium → Polonium  Pyrolusite is an ore of: (1) Uranium (3) Manganese (4) Titanium (3) Manganese (4) Titanium (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> (5) Ethane + propane (6) Ethane + propane (7) Ethane + acetylene		200
(3) Altitude (4) Wind speed  Correct order of Uranium decay series is: (1) Uranium → Radium → Polonium → Thorium (2) Uranium → Radium → Thorium → Thorium (3) Uranium → Radium → Thorium → Polonium (4) Uranium → Thorium → Radium → Polonium  Pyrolusite is an ore of: (1) Uranium (3) Manganese (2) Niobium (3) Manganese (4) Titanium (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> (5) Ethane + propane (6) Ethane + propane (7) Ethane + butane (8) Propane + butane (9) Butane + acetylene		
(4) Wind speed  Correct order of Uranium decay series is:  (1) Uranium → Radium → Polonium → Thorium  (2) Uranium → Polonium → Radium → Thorium  (3) Uranium → Radium → Thorium → Polonium  (4) Uranium → Thorium → Radium → Polonium  Pyrolusite is an ore of:  (1) Uranium  (2) Niobium  (3) Manganese (4) Titanium  (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> (3) Fropane + ethane  (2) Ethane + propane  (3) Propane + butane  (4) Butane + acetylene		26
Correct order of Uranium decay series is:  (1) Uranium → Radium → Polonium → Thorium  (2) Uranium → Polonium → Radium → Thorium  (3) Uranium → Radium → Thorium → Polonium  (4) Uranium → Thorium → Radium → Polonium  Pyrolusite is an ore of:  (1) Uranium  (2) Niobium  (3) Manganese (4) Titanium  (1) zero (2) 1.0 m s <sup>-1</sup> (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> (4) Methane + ethane  (2) Ethane + propane  (3) Propane + butane  (4) Butane + acetylene		
<ol> <li>(1) Uranium → Radium → Polonium → Thorium</li> <li>(2) Uranium → Polonium → Radium → Thorium</li> <li>(3) Uranium → Radium → Thorium → Polonium</li> <li>(4) Uranium → Thorium → Radium → Polonium</li> <li>Pyrolusite is an ore of:</li> <li>(1) Uranium</li> <li>(2) Niobium</li> <li>(3) Manganese</li> <li>(4) Titanium</li> <li>(5) Niobium</li> <li>(7) Zero</li> <li>(8) 10 m s<sup>-1</sup></li> <li>(9) 1.0 m s<sup>-1</sup></li> <li>(1) Zero</li> <li>(2) 1.0 m s<sup>-1</sup></li> <li>(3) 10 m s<sup>-1</sup></li> <li>(4) 15 m s<sup>-1</sup></li> <li>(5) Ethane + propane</li> <li>(6) Ethane + butane</li> <li>(7) Ethane + acetylene</li> </ol>	7.	Correct order of Uranium decay series is:
<ul> <li>(2) Uranium → Polonium → Radium → Thorium</li> <li>(3) Uranium → Radium → Thorium → Polonium</li> <li>(4) Uranium → Thorium → Radium → Polonium</li> <li>Pyrolusite is an ore of:</li> <li>(1) Uranium</li> <li>(2) Niobium</li> <li>(3) Manganese</li> <li>(4) Titanium</li> <li>(blocity of geostationary satellite with respect to earth in the main constituents of Liquefied Petroleum Gas (LPG II) Methane + ethane</li> <li>(2) Ethane + propane</li> <li>(3) Propane + butane</li> <li>(4) Butane + acetylene</li> </ul>	•	Uranium → Radium → Polonium →
<ul> <li>(3) Uranium → Radium → Thorium → Polonium</li> <li>(4) Uranium → Thorium → Radium → Polonium</li> <li>Pyrolusite is an ore of: <ol> <li>Uranium</li> <li>Ethanganese</li> <li>Uranium</li> <li>Itanium</li> <li>Uranium</li> <li>Uranium</li> <li>Uranium</li> <li>Uranium</li> <li>Uranium</li> <li>Uranium → Radium → Radium → Polonium</li> <li>Itanium → Polonium</li> <li>Uranium → Polonium</li> <li>Itanium → Polonium</li> <li>Uranium → Polonium</li> <li>Itanium → Polonium → Polonium → Polonium</li> <li>Itanium → Polonium</li></ol></li></ul>		Uranium → Polonium → Radium →
<ul> <li>(4) Uranium → Thorium → Radium → Polonium</li> <li>Pyrolusite is an ore of:         <ol> <li>(1) Uranium</li> <li>(2) Niobium</li> </ol> </li> <li>(3) Manganese</li> <li>(4) Titanium</li> <li>Velocity of geostationary satellite with respect to earth in the same of the satellite with respect to earth in the same of the satellite with respect to earth in the same of the satellite with respect to earth in the same of the satellite with respect to earth in the same of the satellite with respect to earth in the satellite with respect to</li></ul>		Uranium → Radium → Thorium →
Pyrolusite is an ore of:  (1) Uranium (2) Niobium (3) Manganese (4) Titanium  Velocity of geostationary satellite with respect to earth i (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> The main constituents of Liquefied Petroleum Gas (LPG (1) Methane + ethane (2) Ethane + butane (3) Propane + butane (4) Butane + acetylene		Uranium → Thorium → Radium →
(1) Uranium (2) Niobium (3) Manganese (4) Titanium  Velocity of geostationary satellite with respect to earth i (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> The main constituents of Liquefied Petroleum Gas (LPG (1) Methane + ethane (2) Ethane + propane (3) Propane + butane (4) Butane + acetylene	8.	Pyrolusite is an ore of:
(3) Manganese (4) Titanium  Velocity of geostationary satellite with respect to earth i  (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> The main constituents of Liquefied Petroleum Gas (LPG  (1) Methane + ethane  (2) Ethane + propane  (3) Propane + butane  (4) Butane + acetylene		Uranium (2)
Velocity of geostationary satellite with respect to earth i  (1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> The main constituents of Liquefied Petroleum Gas (LPG (1) Methane + ethane (2) Ethane + propane (3) Propane + butane (4) Butane + acetylene		Manganese (4)
(1) zero (2) 1.0 m s <sup>-1</sup> (3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> The main constituents of Liquefied Petroleum Gas (LPG (1) Methane + ethane (2) Ethane + propane (3) Propane + butane (4) Butane + acetylene	æ	
(3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup> The main constituents of Liquefied Petroleum Gas (LPG  (1) Methane + ethane  (2) Ethane + propane  (3) Propane + butane  (4) Butane + acetylene		zero (2)
The main constituents of Liquefied Petroleum Gas (LPG (1) Methane + ethane (2) Ethane + propane (3) Propane + butane (4) Butane + acetylene		10 m s <sup>-1</sup> (4)
	10.	The main constituents of Liquefied Petroleum Gas (LPG
	•	
	<u> </u>	

11. Food chain always starts with  (1) Photosynthesis (2) Respiration (3) Transpiration (4) Denitrification  12. Vinegar is prepared from alcohol with the help of: (1) Lactobacillus (2) Acetobacter (3) Azotobacter (4) Rhizobium  13. The diversity of habitats over the landscape or geographical 2area is known as: (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity  14. Which of the following pyramid is always upright? (1) Pyramid of number (2) Pyramid of homass (4) All of the above  15. Which one of the following is found in tropical rainforests? (1) Neem tree (2) Mandalwood tree	Question No.	Questions
(1) Photosynthesis (2) Respiration (3) Transpiration (4) Denitrification  Vinegar is prepared from alcohol with the help of: (1) Lactobactlus (2) Acetobacter (3) Azatobacter (4) Ehizobium  The diversity of habitats over the landscape or geographical 2area known as: (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity (3) Gamma diversity (4) Species diversity (1) Pyramid of number (2) Pyramid of energy (3) Pyramid of biomass (4) All of the above  Which one of the following is found in tropical rainforests? (1) Neem tree (2) Mahogany tree (3) Teak tree (4) Sandalwood tree	1.	Food chain always starts with
Vinegar is prepared from alcohol with the help of:  (1) Loctobacillus (2) Acetobacter (3) Azotobacter (4) Fhizobium  The diversity of habitats over the landscape or geographical 2area known as: (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity (9) Pyramid of number (1) Pyramid of energy (2) Pyramid of biomass (4) All of the above  Which one of the following is found in tropical rainforests? (1) Neem tree (2) Mahogany tree (3) Teak tree (4) Sandalwood tree	) 2 - 1 3 - 2	Photosynthesis (2)
Vinegar is prepared from alcohol with the help of:  (1) Lactobactillus (2) Acetobacter (3) Azotobacter (4) Ehizobium  The diversity of habitats over the landscape or geographical 2area known as: (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity (1) Pyramid of number (2) Pyramid of number (3) Pyramid of biomass (4) All of the above  Which one of the following is found in tropical rainforests? (1) Neem tree (2) Mahogany tree (3) Teak tree (4) Sandalwood tree		Transpiration (4)
(1) Lactobacillus (2) Acetobacter (3) Azatobacter (4) Ehizobium  The diversity of habitats over the landscape or geographical 2area known as: (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity  Which of the following pyramid is always upright? (1) Pyramid of number (2) Pyramid of energy (3) Pyramid of biomass (4) All of the above  Which one of the following is found in tropical rainforests? (1) Neem tree (2) Mahogany tree (3) Teak tree (4) Sandalwood tree	12.	from alcohol with the help of
(3) Azotobacter (4) Rhizobium  The diversity of habitats over the landscape or geographical 2area known as: (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity (I) Pyramid of number (I) Pyramid of energy (I) Pyramid of biomass (I) All of the above  Which one of the following is found in tropical rainforests? (I) Neem tree (I) Neem tree (I) Sandalwood tree		Lactobacillus (2)
The diversity of habitats over the landscape or geographical 2area known as:  (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity  Which of the following pyramid is always upright? (1) Pyramid of number (2) Pyramid of biomass (4) All of the above  Which one of the following is found in tropical rainforests? (1) Neem tree (2) Mahogany tree (3) Teak tree (4) Sandalwood tree	9 8 4, 2	Azotobacter (4)
known as:  (1) Alpha diversity (2) Beta diversity (3) Gamma diversity (4) Species diversity  Which of the following pyramid is always upright? (1) Pyramid of number (2) Pyramid of energy (3) Pyramid of biomass (4) All of the above  Which one of the following is found in tropical rainfores  (1) Neem tree (2) Mahogany tree (3) Teak tree (4) Sandalwood tree	13.	diversity of habitats over the landscape or geographical 2area
<ol> <li>(1) Alpha diversity</li> <li>(2) Beta diversity</li> <li>(3) Gamma diversity</li> <li>(4) Species diversity</li> <li>Which of the following pyramid is always upright?</li> <li>(1) Pyramid of number</li> <li>(2) Pyramid of energy</li> <li>(3) Pyramid of biomass</li> <li>(4) All of the above</li> <li>Which one of the following is found in tropical rainfores</li> <li>(1) Neem tree</li> <li>(2) Mahogany tree</li> <li>(3) Teak tree</li> <li>(4) Sandalwood tree</li> </ol>		known as:
(3) Gamma diversity (4) Species diversity  Which of the following pyramid is always upright?  (1) Pyramid of number  (2) Pyramid of energy  (3) Pyramid of biomass  (4) All of the above  Which one of the following is found in tropical rainfores  (1) Neem tree (2) Mahogany tree  (3) Teak tree (4) Sandalwood tree		Alpha diversity (2)
Which of the following pyramid is always upright?  (1) Pyramid of number  (2) Pyramid of energy  (3) Pyramid of biomass  (4) All of the above  Which one of the following is found in tropical rainfores  (1) Neem tree  (2) Mahogany tree  (3) Teak tree  (4) Sandalwood tree		Gamma diversity (4)
<ol> <li>Pyramid of number</li> <li>Pyramid of energy</li> <li>Pyramid of biomass</li> <li>All of the above</li> <li>Which one of the following is found in tropical rainfores</li> <li>Neem tree</li> <li>Mahogany tree</li> <li>Teak tree</li> <li>Sandalwood tree</li> </ol>	14.	Which of the following pyramid is always upright?
<ul> <li>(2) Pyramid of energy</li> <li>(3) Pyramid of biomass</li> <li>(4) All of the above</li> <li>Which one of the following is found in tropical rainfores</li> <li>(1) Neem tree</li> <li>(2) Mahogany tree</li> <li>(3) Teak tree</li> <li>(4) Sandalwood tree</li> </ul>		
<ul> <li>(3) Pyramid of biomass</li> <li>(4) All of the above</li> <li>Which one of the following is found in tropical rainfores</li> <li>(1) Neem tree</li> <li>(2) Mahogany tree</li> <li>(3) Teak tree</li> <li>(4) Sandalwood tree</li> </ul>	.*	
(4) All of the above  Which one of the following is found in tropical rainfores  (1) Neem tree  (2) Mahogany tree  (3) Teak tree  (4) Sandalwood tree		
Which one of the following is found in tropical rainfores  (1) Neem tree  (2) Mahogany tree  (3) Teak tree  (4) Sandalwood tree		
Neem tree (2) Teak tree (4)	15.	Which one of the following is found in tropical rainforests?
Teak tree (4)		Neem tree (2)
		Teak tree (4)

(3)	19. Re (1) 20. Th	17. Si (1)	16. W	Question
Ecotone w many ml. of 20 M NH <sub>3</sub> musution:	d Data Book is published by:  IUCN (2) USEPA  WWF (4) IG-BP  e area where two major communities meet and togeth  Ecads (9) Fortune	iberian crane is regular visitor of which national park?  l) Keoladeo national park (2) Dudhwa national park  3) Bandipur national park (4) Kanha national park	Which one of the following lakes is formed due to wind action?  1) Aeolian lakes (2) Shoreline lake  3) Solution lake (4) Lateral lake	Questions
Red Data Book is published by:  (1) IUCN (2) USEPA (3) WWF (4) IG-BP  The area where two major communities meet (2) Fortune			Siberian crane is regular visitor of v  (1) Keoladeo national park (2)  (3) Bandipur national park (4)	Which one of the following lakes is 1  (1) Aeolian lakes (2) (3) Solution lake (4)  Siberian crane is regular visitor of v  (1) Keoladeo national park (2) (3) Bandipur national park (4)

Question No. 22.
ĕ
24.
25.
26.
27.
MPH/PHD/URS-EE-2020 (Environmental

6

Question No.	Questions
28.	Electrophoresis can not be used for the separation of:
	Amino acids (2)
	(3) Lipids (4) Nucleic acid
29.	SDS contains carbon atoms:
	(1) 6 (2) 10 (3) 12 (4) 16
30.	Which of the following pesticide contains sulphur atoms?
	(1) Malathion (2) DDT
	(3) 2, 4-D (4) Carbaryl
Ç3	If the Arithmetic mean of a set of two observations is 9 and its Geometric
	mean is o. Then the Harmonic mean of the set of observations is:
2000 00000000	15
32.	Gaussian Plume model is about :
	(1) Microorganism growth
	(2) Risk assessment
	(3) Predator-prey interactions
	(4) Air pollution dispersion
<b>8</b>	Chi-square curve ranges from:
	$(1) -\infty to +\infty \qquad (2) -\infty to 0$

(3) 0 to  $\infty$ 

(4) 0 to 1

Question	Questions
34.	Mode of the series 0, 0, 0, 2, 2, 3, 3, 8, 10 is:
	(1) 0 (2) 2
	(3) 3 (4) 10
35.	The midpoint of the values after they have been ordered from the smallest
	to the largest or the largest to the smallest is called:
	(1) Mean (2) Median
	(3) Lower quartile (4) Upper quartile
36.	The probability of an event cannot be:
	(1) 0.3 (2) 0.5
	(3) -0.5 (4) 1.0
37.	What is the Median of the following set of scores? 3, 6, 9, 4, 7, 2, 8:
2 **	(1) 3 (2) 4 (3) 6 (4) 9
38.	If all frequencies of classes are same, the value of Chi-square is:
	(1) Zero (2) One
	(3) Infinity (4) Can not be predicted
39.	Which of the following radiations has maximum energy?
	(1) Infrared radiations
	(2) Gamma radiation
	(3) UV radiations
	(4) Microwave radiations

Question No.	Questions
40.	Sardar Sarovar Dam is built on which river?
	(1) Krishna river (2) Cauvery river
	(3) Narmada river (4) Bhagirathi river
41.	The groundwater of the Bangladesh is severely polluted by which heavy
	metal?
	(1) Lead (2) Arsenic
	(3) Cadmium (4) Mercury
42.	Which committee reviews the EIA and EMP reports of developmental
	projects in Ministry of Environment, Forest and Climate Change?
	(1) Project Assessment Committee
	(2) Project Evaluation Committee
	(3) Environmental Clearance Committee
	(4) Environment Appraisal Committee
43.	Which of the following is not a step of EIA methodology?
	(1) Baseline study (2) Scoping
47	(3) Environmental auditing (4) Screening
44.	Which of the following methodologies can not be used for assessing the
	ent?
	(1) Adhoc method (2) Flexible method
	(3) Overlay method (4) Matrix method
WPH/P	MPH/PHD/URS-EE-2020 (Environmental Science) Code-C
5	

Question No.
46.
47.
48.
49.

Question No.	Questions
50.	According to Solid Waste Management Rules, 2016, Special Economic Zones (SEZ) to earmark at least of the total area of the plot for recovery and recycling facility.  (1) 1% (2) 2%  (3) 3% (4) 5%
51.	Which one of the following is not correctly matched?  (1) Calcium - Dolomite (2) Uranium - Pitchblende  (3) Lead - Galena (4) Mercury - Malachite
52.	The amount of water vapor in the air as a proportion of the maximum amount the air could hold at the temperature is called as  (1) Relative humidity (2) Dew point  (3) Evaporation rate (4) Infiltration
53.	Which of the following is most abundant natural acid?  (1) Hydrochloric acid  (2) Phosphoric acid  (3) Carbonic acid  (4) Nitric acid
54.	Which one of the following is correct?  (1) Soil organic matter (%) = 1.472 × Soil organic carbon (%)  (2) Soil organic matter (%) = 1.724 × Soil organic carbon (%)  (3) Soil organic matter (%) = 0.58 × Soil organic carbon (%)  (4) Soil organic matter (%) = 1.274 × Soil organic carbon (%)

MPH/PHD/URS-EE-2020 (Environmental Science) Code-C (10)

uestion No.	Questions
55.	The altitudinal distance of a geostationary satellite from the earth is about
	(1) 22,000 km (2) 28,000 km
	(3) 36,000 km (4) 42,000 km
56.	Which of the following is correct?
	(1) Refractive index of the ocean water increases with salinity
	(2) Refractive index of the ocean water increases with temperature
a to	(3) Refractive index of the ocean water decreases with salinity
	(4) Refractive index of the ocean water decreases with temperature
57.	receives rainfall from both the South-West and North-West
	monsoons.
	(1) Lakshadweep Islands
-	(2) Andaman and Nicobar Islands
	(3) Tamilnadu
	(4) Jammu and Kashmir
58.	Which of the following is not correct about Tropical cyclones?
	(1) A tropical cyclone is a rapidly rotating storm system characterized by
	a low-pressure
	(2) Tropical cyclones are steered primarily westward by the westerlies
50	(3) Atleast 26.5 °C sea surface temperature is required for the formation
	of a tropical cyclone
	(4) Tropical cyclones are steered primarily westward by the Easterlies

Question No.		Questions
59.	Which one of the following	ng is the Intensity scale of the earthquake?
	(1) Richter scale	(2) Mercalli scale
	(3) Kelvin scale	(4) Mohs scale
60.	Tsunami is caused by	
	(1) Earthquake	(2) Hurricane
	(3) El nino	(4) Land slides
61.	Which of the following is	s excluded from the scope of Basel convention?
	(1) Radioactive waste	
	(2) Clinical waste	
	(3) Waste of explosive	nature
	(4) Waste oils/water, h	ydrocarbons/water mixtures, emulsions
62.	Which one of the followi	ng is not a characteristics of hazardous waste?
	(1) Corrosivity	(2) Toxicity
	(3) Ignitability	(4) Biodegradability
63.	For the collection of Ana	atomical waste colour plastic bags are used
	(1) Red	(2) Black
	(3) Yellow	(4) White
64.	If plastics are burnt in i	incinerator at low temperature then which of the
	following gases are prod	luced?
	(1) Phosphine	(2) Dioxins and furans
	(3) Radon	(4) Acetylene gas

MPH/PHD/URS-EE-2020 (Environmental Science) Code-C
(12)

Question No.	Questions
65.	The calorific value of solid waste can be determined experimentally using
	(1) UV-Vis Spectrophotometer (2) ICP-MS
	(3) Bomb calorimeter (4) Flame photometer
66.	Which of the following scale is used to determine the hardness of the solid waste?
	(1) Moh's scale (2) Kelvin's scale
	(3) Avogadro's scale (4) Dobson's scale
67.	Incineration process is done at a temperature of
	(1) 60-100 °C (2) 350-500 °C
	(3) 850-1100 °C (4) 1500-2000 °C
68.	Which one of the following is not a Composting method?
10 LB	(1) NADEP method (2) Bangalore method
2 a a	(3) Mangalore Method (4) Indore method
69.	is used as a natural liner in landfills.
± 8 ∵a	(1) Clay (2) HDPE
a	(3) Silt (4) Gravel

MPH/PHD/URS-EE-2020 (Environmental Science) Code-C (13)

Question No.	Questions
70.	Which of the following is not correct about Lotka - Volterra model?
	(1) Deals with predator-pray interactions
	(2) It has a pair of second-order linear differential equations
	(3) This model assumes that the prey population finds ample food at
	all times
	(4) This model assumes that predators have limitless appetite
71.	Which of the following is a Pozzolana, material?
	(1) Cement (2) Fly ash
	(3) River sand (4) Activated sludge
72.	What are Bharat Stage VI (BS VI) standards?
	(1) Drinking water standards
	(2) Ambient air quality standards
	(3) Emission standard from vehicles
	(4) Emission standard from brick kilns
73.	Which gland of human body is affected by Iodine deficiency?
	(1) Pituitary gland (2) Pineal gland
	(3) Hypothalamus (4) Thyroid gland
74.	The octane number of iso-octane is?
	(1) 0 (2) 1
	(3) 10 (4) 100

MPH/PHD/URS-EE-2020 (Environmental Science) Code-C (14)

Question No.	Questions
75.	Photolysis of $NO_2$ occurs due to the radiations of which wavelength?  (1) <390 nm  (2) $400-450$ nm  (3) $500-574$ nm  (4) >574 nm
76.	Which of the following has maximum tendency to combine with haemoglobin?
	(1) CO (2) NOx (3) SOx (4) Pb
77.	Which of the following is not a criteria air pollutant?  (1) CO (2) $CO_2$ (3) Pb (4) $O_3$
78.	Efficiency of primary production in an ocean is:  (1) 0.02 % (2) 0.2 %  (3) 2 % (4) 20 %
79.	Wastewater detention time in Grit chamber is: (1) 2 minutes (2) 2 hours
	(3) 8 hours (4) 2 days
80.	In which season is the ozone found at its maximum level in the northern hemisphere?
# #	(1) Winter (2) Spring (3) Summer (4) Autumn

Question No.	Questions
81.	In an isothermal process, the internal energy:
	(1) increases
e <sup>ji</sup>	(2) decreases
	(3) first increases then decreases
	(4) remains constant
82.	Wind roses typically use cardinal directions.
	(1) 4 (2) 8 (3) 16 (4) 32
83.	In which layer of the atmosphere, air is dry?
	(1) Troposphere
	(2) Stratosphere
*v	(3) Thermosphere
	(4) Ionosphere
84.	Which among these has maximum percentage (by volume) in dry air?
r	(1) Carbon dioxide (2) Argon
	(3) Methane (4) Hydrogen
85.	Which of the following is not amongst the components of photochemical
	emog?
	(1) Unsaturated hydrocarbon (2) NO <sub>2</sub>
	(3) SO <sub>2</sub> (4) Ozone

MPH/PHD/URS-EE-2020 (Environmental Science) Code-C (16)

Neotropical (2) Palaearctic  Ethiopian (4) Oriental  tich of the following is longest mountain range?  The Andes  The Himalayas  The Ural Mountains  The Kunlun Mountains  e correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
Neotropical (2) Palaearctic  Ethiopian (4) Oriental  nich of the following is longest mountain range?  The Andes  The Himalayas  The Ural Mountains  The Kunlun Mountains  correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
The Andes The Himalayas The Ural Mountains The Kunlun Mountains  The correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
The Andes The Himalayas The Ural Mountains The Kunlun Mountains  correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
The Andes The Himalayas The Ural Mountains The Kunlun Mountains  correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
The Ural Mountains  The Kunlun Mountains  correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
The Kunlun Mountains  correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
e correct sequence of four stages of water movement in the hydrological le is:  Evaporation - Condensation - Precipitation - Infiltration
le is :  Evaporation - Condensation - Precipitation - Infiltration
le is:  Evaporation - Condensation - Precipitation - Infiltration
Evaporation - Precipitation - Condensation - Infiltration
Precipitation - Evaporation - Condensation - Infiltration
Precipitation - Evaporation - Infiltration - Condensation
in ecosystem, energy flow is :
Always unidirectional
Always bidirectional
In any direction
Always down direction

Question No.	Questions
90.	The number of The Sustainable Development Goals (SDGs), adopted by a United Nations Member States in 2015 is
	(1) 7 (2) 12 (3) 17 (4) 24
91.	As per IS 10500: 2012, Acceptable limit of nitrate (as NO <sub>3</sub> ) in drinkin water is:
	(1) 15 mg/L (2) 45 mg/L
	(3) 55 mg/L (4) 100 mg/L
92.	As per the Noise Pollution (Regulation and Control) Rules, 2000, the nigh
	time limits of noise in residential area is :
	(1) 35 dB (A) Leq (2) 45 dB (A) Leq
	(3) 55 dB (A) Leq (4) 75 dB (A) Leq
93.	According to the amount of gas dissolved in a liquid is proportions to its partial pressure above the liquid.
	(1) Dalton's Law (2) Henry's Law
	(3) Gay Lussac's Law (4) Raoult's Law
94.	Sulphur dioxide in ambient air is determined by:
	(1) Modified West and Gaeke Method
	(2) Jackson Candle method
	(3) Jacob and Hochheiser modified Method
	(4) Gas Phase Chemiluminescence method
IPH/P	HD/URS-EE-2020 (Environmental Science) Code-C
	(18) Code-C

Question No.	Questions
95.	"Fanning" plumes are obtained under :
	(1) unstable atmosphere
	(2) neutral atmospheric conditions
Mer se <sup>ll</sup> tus New Selltus	(3) super adiabatic environment
	(4) extreme inversion condition
96.	After 5 days of incubation at 20°C, the residual dissolved oxygen in blanks
	was 7.80 mg/L and in a 0.1 percent dilution of the waste was 2.30 mg/L.
	What is the 5-day BOD of the waste?
	(1) 55 mg/L (2) 550 mg/L
	(3) 5500 mg/L (4) 55000 mg/L
97.	How much oxygen $(O_2)$ in gm is required for complete combustion of 44g of propane ?
	(1) 32 g (2) 64 g
	(3) 82 g (4) 160 g
98.	Turbidity of water can be determined by:
	(1) Hydrograph
	(2) Nephelometer
	(3) Atomic absorption spectrophotometer
	(4) Liquid Scintillation counter

Question No.	Questions
99.	The soil order "vertisol" is related to:  (1) Alluvial soil  (2) Red soil  (3) Black soil  (4) Laterite soil
100.	Which one of the following is not suitable worm species for vermicomposting?  (1) Eisenia fetia  (2) Eudrilus eugeniae  (3) Pheretima posthuman  (4) Periohyx excavatus

## SET-"X"

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

## (MPH/PHD/URS-EE-2020)

# **Environmental Science**

	10116
Sr. No.	

Cod

- 1		
	1	
- 1	4 7	

Time: 1¼ Hours Roll No.	Total Question (in figure)	Max. Marks : 100 (in words)
Name :		(M words)
Mother's Name :		tion :

(Signature of the candidate)

(Signature of the Invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION/ INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

All questions are compulsory. 1.

- The candidates must return the Question book-let as well as OMR 2. answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
- Keeping in view the transparency of the examination system, carbonless OMR 3. Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
- Question Booklet along with answer key of all the A,B,C and D code will be got 4 uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E-Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.

The candidate MUST NOT do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers

MUST NOT be ticked in the Question book-let.

There will be no negative marking. Each correct answer will be awarded 6. one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.

Use only Black or Blue BALL POINT PEN of good quality in the OMR Answer-7.

Sheet.

BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD 8. ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.

Question No.	Questions
1.	In an isothermal process, the internal energy:  (1) increases  (2) decreases  (3) first increases then decreases  (4) remains constant
2.	Wind roses typically use cardinal directions.  (1) 4 (2) 8 (3) 16 (4) 32
3.	In which layer of the atmosphere, air is dry?  (1) Troposphere  (2) Stratosphere  (3) Thermosphere  (4) Ionosphere
	Which among these has maximum percentage (by volume) in dry air?  (1) Carbon dioxide (2) Argon  (3) Methane (4) Hydrogen
	Which of the following is not amongst the components of photochemical smog?  (1) Unsaturated hydrocarbon (2) NO <sub>2</sub>
/PH/DI	(3) SO <sub>2</sub> (4) Ozone

Questions		
India is considered under which region in zoogeography?		
(1) Neotropical (2) Palaearctic		
(3) Ethiopian (4) Oriental		
Which of the following is longest mountain range?		
(1) The Andes		
(2) The Himalayas		
(3) The Ural Mountains		
(4) The Kunlun Mountains		
The correct sequence of four stages of water movement in the hydrological cycle is:		
(1) Evaporation - Condensation - Precipitation - Infiltration		
(2) Evaporation - Precipitation - Condensation - Infiltration		
(3) Precipitation - Evaporation - Condensation - Infiltration		
(4) Precipitation - Evaporation - Infiltration - Condensation		
In an ecosystem, energy flow is:		
(1) Always unidirectional		
(2) Always bidirectional		
(3) In any direction		
(4) Always down direction		

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D

Question No.	Questions
10.	The number of The Sustainable Development Goals (SDGs), adopted by all United Nations Member States in 2015 is  (1) 7 (2) 12 (3) 17 (4) 24
11.	(4) 12
	Which of the following is a Pozzolana, material?  (1) Cement (2) Flyash
	(3) River sand (4) Activated sludge
12.	What are Bharat Stage VI (BS VI) standards?
	(1) Drinking water standards
	(2) Ambient air quality standards
_0FS	(3) Emission standard from vehicles
a .	(4) Emission standard from brick kilns
13.	Which gland of human body is affected by Iodine deficiency?
	(1) Pituitary gland
-	(2) Pineal gland
	(3) Hypothalamus
	(4) Thyroid gland
14.	The octane number of iso-octane is ?
	(1) 0 (2) 1
	(3) 10 (4) 100

Question No.			
15.	Photolysis of NO <sub>2</sub> occurs	due to the radiations of which wavelength?	
	(1) < 390 nm		
	(2) 400 – 450 nm		
	(3) 500 – 574 nm		
	(4) >574 nm	Se Sher Mahayan	
16.	Which of the following	g has maximum tendency to combine with	
	haemoglobin?	Death and remain of equipment to age	
	(1) CO	(2) NO <sub>x</sub>	
	(3) SO <sub>x</sub>	(4) Pb	
17. Which of the following is not a criteria air pollutant		not a criteria air pollutant ?	
	(1) CO	(2) CO <sub>2</sub>	
48	(3) Pb	(4) O <sub>3</sub>	
18.	Efficiency of primary pro	duction in an ocean is:	
	(1) 0.02%	(2) 0.2 %	
	(3) 2 %	(4) 20 %	
19.	Wastewater detention time in Grit chamber is:		
10 02	(1) 2 minutes	(2) 2 hours	
#	(3) 8 hours	(4) 2 days	

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D
(4)

Question No.	Questions		
20.	In which season is the ozone found at its maximum level in the northern		
	hemisphere?		
	(1) Winter (2) Spring		
	(3) Summer (4) Autumn		
21.	Which of the following is excluded from the scope of Basel convention?		
	(1) Radioactive waste		
	(2) Clinical waste		
*	(3) Waste of explosive nature		
	(4) Waste oils/water, hydrocarbons/water mixtures, emulsions		
22.	Which one of the following is not a characteristics of hazardous waste?		
	(1) Corrosivity (2) Toxicity		
	(3) Ignitability (4) Biodegradability		
23.	For the collection of Anatomical waste colour plastic bags are used.		
72	(1) Red (2) Black		
	(3) Yellow (4) White		
24.	If plastics are burnt in incinerator at low temperature then which of the following gases are produced?		
	(1) Phosphine		
12	(2) Dioxins and furans		
	(3) Radon		
	(4) Acetylene gas		

Question No.	Questions
25.	The calorific value of solid waste can be determined experimentally
	using
	(1) UV-Vis Spectrophotometer
	(2) ICP-MS
4	(3) Bomb calorimeter
	(4) Flame photometer
26.	Which of the following scale is used to determine the hardness of the solid
	waste?
-	(1) Moh's scale (2) Kelvin's scale
	(3) Avogadro's scale (4) Dobson's scale
27.	Incineration process is done at a temperature of
	(1) 60 - 100 °C (2) 350 - 500 °C
-,	(3) 850-1100 °C (4) 1500-2000 °C
28.	Which one of the following is not a Composting method?
	(1) NADEP method
*	(2) Bangalore method
	(3) Mangalore Method
Same 1.4	(4) Indore method
29.	is used as a natural liner in landfills.
	(1) Clay (2) HDPE
e - ' .	(3) Silt (4) Gravel

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D
(6)

Question No.	Questions
30.	<ul> <li>Which of the following is not correct about Lotka - Volterra model?</li> <li>(1) Deals with predator-pray interactions</li> <li>(2) It has a pair of second-order linear differential equations</li> <li>(3) This model assumes that the prey population finds ample food at all times</li> <li>(4) This model assumes that predators have limitless appetite</li> </ul>
31.	(4) This model assumes that predators have limitless appetite  As per IS 10500: 2012, Acceptable limit of nitrate (as NO <sub>3</sub> ) in drinking water is:  (1) 15 mg/L  (2) 45 mg/L  (3) 55 mg/L  (4) 100 mg/L
32.	As per the Noise Pollution (Regulation and Control) Rules, 2000, the night time limits of noise in residential area is:  (1) 35 dB (A) Leq  (2) 45 dB (A) Leq  (3) 55 dB (A) Leq  (4) 75 dB (A) Leq
33.	According to the amount of gas dissolved in a liquid is proportional to its partial pressure above the liquid.  (1) Dalton's Law  (2) Henry's Law  (3) Gay Lussac's Law  (4) Raoult's Law

Question No.	Questions
34.	Sulphur dioxide in ambient air is determined by:
	(1) Modified West and Gaeke Method
	(2) Jackson Candle method
	(3) Jacob and Hochheiser modified Method
	(4) Gas Phase Chemiluminescence method
35.	"Fanning" plumes are obtained under:
	(1) unstable atmosphere
	(2) neutral atmospheric conditions
	(3) super adiabatic environment
	(4) extreme inversion condition
36.	After 5 days of incubation at 20°C, the residual dissolved oxygen in blank was 7.80 mg/L and in a 0.1 percent dilution of the waste was 2.30 mg/I What is the 5-day BOD of the waste?
	(1) 55 mg/L (2) 550 mg/L
	(3) $5500 \mathrm{mg/L}$ (4) $55000 \mathrm{mg/L}$
37.	How much oxygen $(O_2)$ in gm is required for complete combustion of 44g oppopane?
	(1) 32 g (2) 64 g
	(3) 82 g (4) 160 g
MPH/P	HD/URS-EE-2020 (Environmental Science) Code-D

Question No.	Questions							
38.	Turbidity of water can be determined by:  (1) Hydrograph  (2) Nephelometer  (3) Atomic absorption spectrophotometer							
**************************************	(4) Liquid Scintillation counter							
39.	The soil order "vertisol" is related to:  (1) Alluvial soil  (2) Red soil  (3) Black soil  (4) Laterite soil							
40.	Which one of the following is not suitable worm species for vermicomposting?  (1) Eisenia fetia  (2) Eudrilus eugeniae  (3) Pheretima posthuman  (4) Periohyx excavatus							
41.	Which one of the following is not correctly matched?  (1) Calcium - Dolomite (2) Uranium - Pitchblende  (3) Lead - Galena (4) Mercury - Malachite							
42.	The amount of water vapor in the air as a proportion of the maximum amount the air could hold at the temperature is called as  (1) Relative humidity (2) Dew point (3) Evaporation rate (4) Infiltration							

Question No.	Questions							
43.	Which of the following is most abundant natural acid?							
or R. C.	(1) Hydrochloric acid (2) Phosphoric acid							
	(3) Carbonic acid (4) Nitric acid							
44.	Which one of the following is correct?							
	(1) Soil organic matter (%) = $1.472 \times \text{Soil organic carbon}$ (%)							
	(2) Soil organic matter (%) = $1.724 \times \text{Soil organic carbon}$ (%)							
	(3) Soil organic matter (%) = $0.58 \times \text{Soil organic carbon}$ (%)							
	(4) Soil organic matter (%) = 1.274 × Soil organic carbon (%)							
45.	The altitudinal distance of a geostationary satellite from the earth is about							
	(1) 22,000 km (2) 28,000 km							
	(3) 36,000 km (4) 42,000 km							
46.	Which of the following is correct?							
	(1) Refractive index of the ocean water increases with salinity							
	(2) Refractive index of the ocean water increases with temperature							
	(3) Refractive index of the ocean water decreases with salinity							
	(4) Refractive index of the ocean water decreases with temperature							
47.	receives rainfall from both the South-West and North-West							
	monsoons.							
	(1) Lakshadweep Islands							
	(2) Andaman and Nicobar Islands							
	(3) Tamilnadu							
	(4) Jammu and Kashmir							

Question No.	Questions										
48.	Which of the following is not correct about Tropical cyclones?										
*	(1) A tropical cyclone is a rapidly rotating storm system characterized by										
p -	a low-pressure										
	(2) Tropical cyclones are steered primarily westward by the westerlies										
	(3) Atleast 26.5 °C sea surface temperature is required for the formation										
1 m	of a tropical cyclone										
G	(4) Tropical cyclones are steered primarily westward by the Easterlies										
49.	Which one of the following is the Intensity scale of the earthquake?										
* .	(1) Richter scale (2) Mercalli scale										
	(3) Kelvin scale (4) Mohs scale										
50.	Tsunami is caused by:										
	(1) Earthquake (2) Hurricane										
e#1	(3) El nino (4) Land slides										
51.	Food chain always starts with										
	(1) Photosynthesis (2) Respiration										
	(3) Transpiration (4) Denitrification										
52.	Vinegar is prepared from alcohol with the help of:										
	(1) Lactobacillus (2) Acetobacter										
- × ×	(3) Azotobacter (4) Rhizobium										

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D (11)

Question No.	Questions								
53.	The diversity of habitats over the landscape or geographical 2area								
	known as:								
	(1) Alpha diversity	(2) Beta diversity							
	(3) Gamma diversity	(4) Species diversity							
54.	Which of the following pyram	id is always upright?							
	(1) Pyramid of number								
	(2) Pyramid of energy								
	(3) Pyramid of biomass								
	(4) All of the above	ons I M love ever trap							
55.	Which one of the following is	found in tropical rainforests?							
	(1) Neem tree	(2) Mahogany tree							
	(3) Teak tree	(4) Sandalwood tree							
56.	Which one of the following lal	kes is formed due to wind action?							
	(1) Aeolian lakes	(2) Shoreline lake							
f i	(3) Solution lake	(4) Lateral lake							
e de la companya de l		(-) -utorariane							
57.	Siberian crane is regular visit	Communication of the state of t							
57.	Siberian crane is regular visit (1) Keoladeo national park	Communication of the state of t							
57.	Ale	Communication of the state of t							
57.	(1) Keoladeo national park	Communication of the state of t							

EE-2020 (Environmental Science) Code-D
(12)

Question No.	Questions							
58.	Law of minimum was given by:							
	(1) Shelford (2) Leibig							
	(3) Blackman (4) Clement							
59.	Red Data Book is published by :							
	(1) IUCN (2) USEPA							
	(3) WWF (4) IG-BP							
60.	The area where two major communities meet and together is termed as:							
	(1) Ecads (2) Ecotype							
	(3) Ecotone (4) Timber line							
61.	The sequence of processes for production of ethanol from lignocellulosic							
	biomass is:							
	(1) Fermentation, Pre-treatment, Saccharification, Distillation							
	(2) Pre-treatment, Saccharification, Distillation, Fermentation							
	(3) Saccharification, Distillation, Pre-treatment, Fermentation							
	(4) Pre-treatment, Saccharification, Fermentation, Distillation							
62.	Which radioactive isotope is used in geological dating?							
	(1) Cobalt-60 (2) Corbon-14							
	(3) Uranium-238 (4) Technetium-99							

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D (13)

Question No.	Questions								
63.	The temperature at the inner core's surface of earth is estimated to be approximately								
	(1) 2,200 K (2) 3,500 K								
	(3) 4,700 K (4) 5,700 K								
64.	The percentage of CO <sub>2</sub> in biogas is:								
	(1) 50-65 % (2) 30-50 %								
	(3) 10-20% (4) CO <sub>2</sub> is not present in biogas								
65.	The rate of solar energy reaching the earth surface is								
	(1) 526 W (2) 912 W								
2 4	(3) $1016 \text{ W}$ (4) $2.3 \times 10^3 \text{ W}$								
66.	Anemometer is used for the measure of								
	(1) Ambient temperature (2) Humidity								
	(3) Altitude (4) Wind speed								
67.	Correct order of Uranium decay series is :								
	(1) Uranium → Radium → Polonium → Thorium								
	(2) Uranium → Polonium → Radium → Thorium								
	(3) Uranium → Radium → Thorium → Polonium								
	(4) Uranium → Thorium → Radium → Polonium								
MDITO	UD/IPS FF 9090 (Fryironmental Science) C								

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D

Question No.	Questions									
68.	Pyrolusite is an ore of:									
	(1) Uranium (2) Niobium									
	(3) Manganese (4) Titanium									
69.	Velocity of geostationary satellite with respect to earth is:									
	(1) zero (2) $1.0 \text{ m s}^{-1}$									
	(3) 10 m s <sup>-1</sup> (4) 15 m s <sup>-1</sup>									
70.	The main constituents of Liquefied Petroleum Gas (LPG) are :									
	(1) Methane + ethane (2) Ethane + propane									
	(3) Propane + butane (4) Butane + acetylene									
71.	The groundwater of the Bangladesh is severely polluted by which heavy metal?									
	(1) Lead (2) Arsenic									
	(3) Cadmium (4) Mercury									
72.	Which committee reviews the EIA and EMP reports of developmenta projects in Ministry of Environment, Forest and Climate Change?									
	(I) Project Assessment Committee									
	(2) Project Evaluation Committee									
	(3) Environmental Clearance Committee									
	(4) Environment Appraisal Committee									

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D
(15)

Question No.	Questions  Which of the following is not a step of EIA methodology?									
73.										
	(1) Baseline study (2) Scoping									
	(3) Environmental auditing (4) Screening									
74.	Which of the following methodologies can not be used for assessing the									
	impacts of any developmental activity on the environment?									
	(1) Adhoc method									
	(2) Flexible method									
	(3) Overlay method									
	(4) Matrix method									
75.	The number of environmental factors listed on the vertical axis in Leopold Matrix to carrying out the Environmental Impact Assessment:									
	(1) 22 (2) 44									
. 1	/B)									
	(3) 66 (4) 88									
76.	Which one represent the Environmental Management System?									
76.										
76.	Which one represent the Environmental Management System?									
76.	Which one represent the Environmental Management System?  (1) ISO 9001 (2) ISO 14001									
	Which one represent the Environmental Management System?  (1) ISO 9001 (2) ISO 14001  (3) OHSAS 18001 (4) ISO 21001  The concept of environmental auditing in industrial units in India was									

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D
(16)

Question No.	Questions									
78.	In EIA, Three overlapping phases: identification, prediction and evaluation belong to:									
	(1) Impact Analysis (2) Decision making (3) Reporting (4) Review									
79.	The United Nations Commission on Sustainable Development (CSD) was established by the UN General Assembly in which year?									
	(1) 1992 (2) 1999 (3) 2016 (4) 2020									
80.	According to Solid Waste Management Rules, 2016, Special Economic Zones (SEZ) to earmark at least of the total area of the plot for recovery and recycling facility.  (1) 1% (2) 2%									
81.	(3) 3% (4) 5%  How many ml. of 20 M NH <sub>3</sub> must be diluted to 500.0 ml. to make a 0.80 M solution:  (1) 10 mL (2) 20 mL  (3) 25 mL (4) 80 mL									
82.	The half-life of a radioactive material is 12 years. The radioactivity of this material falls to of its initial value after 72 years.									
	(1) 1/6 (2) 1/8 (3) 1/16 (4) 1/64									

Question No.	Questions									
83.	Which of the following is not a secondary air pollutant?									
	(1) PAN	(2)	$O_3$							
	(3) SO <sub>x</sub>	(4)	Acid rain							
84.	222Rn is unstable and decays by losing 6 neutrons and 2 protons. The final									
	decay product is									
	(1) <sup>218</sup> Bi	(2)	<sup>216</sup> Bi							
	(3) 214Po	(4)	212T]							
85.	The percentage of nitrogen in urea is									
	(1) 23.3%	(2)	22.0%							
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(3) 40.6%	(4)	46.6%							
86.	Which indicator is used in W of dissolved oxygen in water		method titration during the estimation							
	(1) Potassium chromate	(2)	Starch solution							
	(3) Methyl orange									
			Phenolphthalein							
87.	Which of the following is chromatography?	locat	ing agent of amino acids in Paper							
	(1) Ninhydrin	(2)	Methyl orange							
light species —	(3) Phenolphthalein	(4)	Brilliant green dye							
88.	Electrophoresis can not be u	used fo	r the separation of							
	(1) Amino acids	(2)	Proteins							
1	(f) This	40								
4	(3) Lipids	(4)	Nucleic acid							

MPH/PHD/URS-EE-2020 (Environmental Science) Code-D

Question No.	Questions										
89.	S	S contain	s(2)	_ car	bon at	1 atoms:		(4) 16			
90.	Which of the following pesticide contains sulphur atoms?										
	(1)	Malathi	on			(2)	DDT		3 <b>-</b> 01		
	(3)	2, 4-D	=		#2	(4)	Carbaryl				
91.				59 av	30 m is - *		we observa				
	(1)	2	(2)	4		(3)	15	(4)	54		
92.	(1) (2)	ussian Plo Microor Risk ass	ganis Jessm	nodel m gro ent	wth	it:	eran	V 110113 -		*	
	(3) (4)	Predato Air poll	i <del>es</del> uico us <del>a</del>	an in a			on test 11 or 85				
93.	Chi	-square c	urve	range	s from	:			*	ű.	•
	(1)	- ∞ to+	<b>∞</b>		Karaman a	(2)	-∞ to 0		ñ = 8	140	
	(3)	0 to ∞	7. 1		35-11 T	(4)	0 to 1	50			
94.	Mode of the series 0, 0, 0, 2, 2, 3, 3, 8, 10 is:										
	(1)	0			1919-11	(2)	2				
	(3)	3		E STATE OF THE STA		(4)	10	1			

Question No.	Questions								
95.	The midpoint of the values after they have been ordered from t	he s $f m$ allest							
	to the largest or the largest to the smallest is called:								
	(1) Mean (2) Median								
	(3) Lower quartile (4) Upper quartile								
96.	. The probability of an event cannot be:	3.							
	(1) 0.3 (2) 0.5 (3) -0.5 (4) 1.0								
97.	What is the Median of the following set of scores ? 3, 6, 9, 4, 7,	2, 8:							
	(1) 3 (2) 4 (3) 6 (4) 9	11							
98.	. If all frequencies of classes are same, the value of Chi-square	is:							
	(1) Zero (2) One								
	(3) Infinity (4) Can not be predicted								
99.	Which of the following radiations has maximum energy?								
1	(1) Infrared radiations (2) Gamma radiation	a .							
	(3) UV radiations (4) Microwave radiations								
100.	Sardar Sarovar Dam is built on which river?								
	(1) Krishna river (2) Cauvery river								
	(3) Narmada river (4) Bhagirathi river								
	the the most of the desired the transport of the property of the second								
1									

Q. 1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10
Ь	d	c	c	d	Ь	a	a	$\frac{1}{c}$	a
Q. 11	Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Q.19	Q.20
d	C	b	Ь	C	d	a	а	a	C
Q. 21	Q.22	Q.23	Q.24	Q.25	Q.26	Q.27	Q.28	Q.29	Q.30
a	b	C	Ь	b	a	a	Ь	a	C
Q. 31	Q.32	Q.33	Q.34	Q.35	Q.36	Q.37	Q.38	Q.39	Q.40
d	a	C	Ь	C	a	Ь	р	Ь	a
Q. 41	Q.42	Q.43	Q.44	Q.45	Q.46	Q.47	Q.48	Q.49	Q.50
d	C	d	Ь	C	d	d	C	a	C
Q. 51	Q.52	Q.53	Q.54	Q.55	Q.56	Q.57	Q.58	Q.59	Q.60
b	Ь	Ь	a	d	C	d	Ь	C	C
Q. 61	Q.62	Q.63	Q.64	Q.65	Q.66	Q.67	Q.68	Q.69	Q.70
b	d	C	Ь	d	Ь	C	а	a	d
Q. 71	Q.72	Q.73	Q.74	Q.75	Q.76	Q.77	Q.78	Q.79	Q.80
a	d	C	Ь	C	a	C	C	a	Ь
Q. 81	Q. 82	Q.83	Q.84	Q.85	Q.86	Q.87	Q.88	Q.89	Q.90
Ь	d	C	a	Ь	C	C	a	Ь	c
Q. 91	Q.92	Q.93	Q.94	Q.95	Q.96	Q.97	Q.98	Q.99	Q100.
Ь	C	d	d	а	а	b	Ь	a	Ь

Q. 1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10
a	d	c	Ь	C	a	x	c	a	Ь
Q. 11	Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Q.19	Q.20
Ь	Ъ	b	a	d	R	d	Ь	1	C
Q. 21	Q.22	Q.23	Q.24	Q.25	Q.26	Q.27	Q.28	Q.29	Q.30
d	a	C	Ь	L	a	Ь	Ь	Ь	a
Q. 31	Q.32	Q.33	Q.34	Q.35	Q.36	Q.37	Q.38	Q.39	Q.40
d	c	Ь	Ь	vC	d	a	а	a	C
Q. 41	Q.42	Q.43	Q.44	Q.45	Q.46	Q.47	Q.48	Q.49	Q.50
Ъ	S	d	d	a	a	Ь	Ь	a	Ь
Q. 51	Q.52	Q.53	Q.54	Q.55	Q.56	Q.57	Q.58	Q.59	Q.60
Ь	d	L	Ь	d	Ь	C	a	a	di
Q. 61	Q.62	Q.63	Q.64	Q.65	Q.66	Q.67	Q.68	Q.69	Q.70
b	d	L	a	Ь	c	c	a	Ь	~
Q. 71	Q.72	Q.73	Q.74	Q.75	Q.76	Q.77	Q.78	Q.79	Q.80
d	K	d	Ь	X	d	d	C	a	C
Q. 81	Q. 82	Q.83	Q.84	Q.85	Q.86	Q.87	Q.88	Q.89	Q.90
a	Ь	C	Ь	Ь	a	a	Ь	a	1
Q. 91	Q.92	Q.93	Q.94	Q.95	Q.96	Q.97	Q.98	Q.99	Q100.
b	d	·	r	d	Ь	a	a	1	a

0.1	0.2	0.2	0.4	0.5	0.6			0.0	0.40
Q. 1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10
d	C	1	P		d	d	C	a	C
Q. 11	Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Q.19	Q.20
a	Ь	C	Ь	b	a	a	b	a	C
Q. 21	Q.22	Q.23	Q.24	Q.25	Q.26	Q.27	Q.28	Q.29	Q.30
Ь	d	C	C	d	Ь	a	a	C	a
Q. 31	Q.32	Q.33	Q.34	Q.35	Q.36	Q.37	Q.38	Q.39	Q.40
Ъ	d	C	a	Ь	C	C	a	Ь	C
Q. 41	Q.42	Q.43	Q.44	Q.45	Q.46	Q.47	Q.48	Q.49	Q.50
Ь	d	C	Ь	d	Ь	C	a	a	d
Q. 51	Q.52	Q.53	Q.54	Q.55	Q.56	Q.57	Q.58	Q.59	Q.60
d	a	C	Ь	c	a	b	Ь	Ь	a
Q. 61	Q.62	Q.63	Q.64	Q.65	Q.66	Q.67	Q.68	Q.69	Q.70
a	d	C	Ь	C	a	C	C	a	b
Q. 71	Q.72	Q.73	Q.74	Q.75	Q.76	Q.77	Q.78	Q.79	Q.80
Ь	C	d	d	a	a	Ь	Ь	a	Ь
Q. 81	Q. 82	Q.83	Q.84	Q.85	Q.86	Q.87	Q.88	Q.89	Q.90
d	C	Ь	Ь	C	d	a	a	a	c
Q. 91	Q.92	Q.93	Q.94	Q.95	Q.96	Q.97	Q.98	Q.99	Q100.
Ь	Ь	Ь	a	d	C	d	Ь	C	C

Q. 1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10
d	С	Ь	d	C	d	a	a	0	<u></u>
Q. 11	Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Q.19	Q.20
Ь	C	d	d	0	a	b	Ь	a	b
Q. 21	Q.22	Q.23	Q.24	Q.25	Q.26	Q.27	Q.28	Q.29	Q.30
a	d	(	Ь	C	a	C	C	a	Ь
Q. 31	Q.32	Q.33	Q.34	Q.35	Q.36	Q.37	Q.38	Q.39	Q.40
Ь	b	р	a	d	C	d	Ь		C
Q. 41	Q.42	Q.43	Q.44	Q.45	Q.46	Q.47	Q.48	Q.49	Q.50
d	a	C	Ь	C	a	ь	Ь	р	a
Q. 51	Q.52	Q.53	Q.54	Q.55	Q.56	Q.57	Q.58	Q.59	Q.60
a	р	C	р	Ь	a	a	р	a	<u></u>
Q. 61	Q.62	Q.63	Q.64	Q.65	Q.66	Q.67	Q.68	Q.69	Q.70
d	C	d	Ь	C	d	d	C	a	
Q. 71	Q.72	Q.73	Q.74	Q.75	Q.76	Q.77	Q.78	Q.79	Q.80
Ь	d	C	b	d	b	C	a	a	d
Q. 81	Q. 82	Q.83	Q.84	Q.85	Q.86	Q.87	Q.88	Q.89	Q.90
b	٩	C	C	9	р	a	a	C	a
Q. 91	Q.92	Q.93	Q.94	Q.95	Q.96	Q.97	Q.98	Q.99	Q100.
Ь	9	c	a	р	С	C	a	р	C