



# HSPCB AEE

Previous Year Paper 07 Apr, 2024



**ALL EXAMS, ONE SUBSCRIPTION** 



1,00,000+ Mock Tests



Personalised Report Card



Unlimited Re-Attempt



600+ Exam Covered



25,000+ Previous Year Papers



500% Refund

















ATTEMPT FREE MOCK NOW





## **MASTER**

 $KK_{\text{(EA64)}}\_0$ 



Number of Pages in Booklet: 16 No. of Questions in Booklet: 100

Maximum Marks: 100

Time: 2 Hours



Juestion Booklet Number

## Please read the instructions given below carefully and follow them.

#### **INSTRUCTIONS**

- 1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES **NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
- 2. Please note that it is the candidate's responsibility to encode and darken the ROLL NUMBER, TEST BOOKLET SERIES Code A, B, C or D and Question Booklet Number carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the OMR Answer Sheet liable for rejection.
- 3. You have to enter your Roll Number on the Test Booklet in the Box provided below. *DO NOT* write *anything else* on the Test Booklet.



- 4. This Test Booklet contains 100 items (questions). Each item shall have five options (A, B, C, D, and E). If a candidate is attempting a question, he has to darken most appropriate circle from A, B, C or D. However if you are not attempting a question then you have to darken the circle 'E'. If none of the five circle is darkened, one-fourth (0.25) marks shall be deducted.
- 5. Any candidate not darkening any of the five circles in more than 10% question shall be disqualified.
- 6. All questions are compulsory. Each question carry one mark. For each wrong Answer, one fourth (0.25) mark shall be deducted.
- 7. You have to mark all your responses *ONLY* on the separate OMR Answer Sheet provided. See directions in the OMR Answer Sheet. Use only **BLUE/BLACK Ball Point Pen** to answer in OMR Answer Sheet.
- 8. Before you proceed to mark in the OMR Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the OMR Answer Sheet as per instructions mentioned on the OMR Answer Sheet.
- 9. At the end of the examination you should handover to the invigilator the original copy and office copy of the OMR Sheet. You are permitted to take away with you the Question Booklet along with candidate's copy of the OMR Sheet.
- 10. Sheets for rough work are appended in the Test Booklet at the end.
- 11. In case of any ambiguity in translation of any question, English version shall be treated as final.

## Do not open this test booklet until you are asked to do so.





1	Pyra	mid of number is inverted in		
	(A)	Forest ecosystem	(B)	Pond ecosystem
	(C)	Grassland ecosystem	(D)	Marine ecosystem
	(E)	Question not attempted		
2	Whi	ch of the following is an example of lot	tic ecc	osystem?
	(A)	Lake	(B)	Pond
	(C)	Swamp	(D)	River
	(E)	Question not attempted		
3	Whic	ch marine ecosystem are the most produ	ictive?	)
	(A)	Estuaries	(B)	Rocky shores
	(C)	Coral reef	(D)	Sandy shores
	(E)	Question not attempted		
4	India	a ranks second in which of the following	g meta	al sector in 2023?
	(A)	Aluminium	(B)	Steel
	(C)	Lead	(D)	Zinc
	(E)	Question not attempted		
5	Whic	ch of the following state has the largest	area	with forest cover in India?
	(A)	Maharashtra	(B)	Chhattisgarh
	(C)	Andhra Pradesh	(D)	Madhya Pradesh
	(E)	Question not attempted		
6	Broa	d leaved forests belong to		
	(A)	Montane sub-tropical	(B)	Alpine forest
	(C)	General forests	(D)	Temperate forest
	(E)	Question not attempted		
7	The	type of forest seen above 3000 m eleva	tion a	re termed as
	(A)	Sub-tropical forests	(B)	Green forests
	(C)	Alpine forests	(D)	Sub alpine forests
	(E)	Question not attempted	· /	1
8	The	National Forest Policy in drafted in the	year	
	(A)	2016	(B)	2002
	(C)	2018	(D)	2019
	(E)	Question not attempted	(-)	

 $KK_{(EA64)}_{0}$  2 P.T.O.





9	The	type of mining wherein bulldozers are u	used to	extract mine is called as	
	(A)	Strip mining	(B)	Dredging	
	(C)	Open pit mining	(D)	Surface mining	
	(E)	Question not attempted			
10		process of land degradation in arid, sending climatic variations and human acti			s factors
	(A)	Land degradation	(B)	Soil erosion	
	(C)	Desertification	(D)	Landslide	
	(E)	Question not attempted			
11	Whi	ch of the following type of drought lead	ls to f	amine?	
	(A)	Meteorological	(B)	Hydrological	
	(C)	Agricultural	(D)	Socio - economic	
	(E)	Question not attempted			
12	Ener	rgy derived from high temperature existi	ng wi	thin the earth surface is known as	
	(A)	Wind energy	(B)	Hydrothermal energy	
	(C)	Geothermal energy	(D)	Solar energy	
	(E)	Question not attempted			
13	Whi	ch of the following state has the largest	wind	farm in India?	
	(A)	Gujarat	(B)	Tamil Nadu	
	(C)	Karnataka	(D)	Madhya Pradesh	
14	(E)	Question not attempted purest form of coal is			
17		Anthracite	(B)	Bituminous coal	
	(C)	Lignite	(D)	Peat Peat	
	(E)	Question not attempted	(D)	i cat	
15	Whi	ch of the following is not a threat to big	adivar	city?	
13	(A)	Introduction of native species	(B)	Habitat fragmentation	
	(C)	Pollution	(D)	Overexploitation	
	(E)	Question not attempted	(D)	Overexpionation	
16	Inter	national Year of Biodiversity is			
-0	(A)	2010	(B)	2015	
	(C)	2000	(D)	2005	
	(E)	Question not attempted		2000	
KK(E	EA64) (	) 3	3		P.T.O.





1 /	wm	ch of the following is not an ex – situ	metno	a of blodiversity conservation?
	(A)	Field bank	(B)	Biosphere reserve
	(C)	Gene bank	(D)	Home garden
	(E)	Question not attempted	` '	
18	Num	aber of wildlife sanctuaries in India is		
	(A)	106	(B)	573
	(C)	18	(D)	55
	(E)	Question not attempted	( )	
19	The	zone which has no human resides in	the Pa	rk, other than a public servant on duty and
		nitted persons by the Chief Wild Life V		<u>-</u>
	(A)	Core	(B)	Buffer
	(C)	Recreation	(D)	Transition
	(E)	Question not attempted	( )	
20	The	first national park in India is		
	(A)	Jim Corbett National Park	(B)	Kanha National Park
	(C)	Pin Valley National Park	(D)	Gir Forest National Park
	(E)	Question not attempted		
21	The	only marine biosphere reserve in India	is	
	(A)	Gulf of Mannar	(B)	Nilgiri biosphere reserve
	(C)	Cold desert	(D)	Nanda Devi
	(E)	Question not attempted	(D)	Trailed Devi
	(L)	Question not attempted		
22	How	many hotspots are present in India?		
	(A)	5	(B)	7
	(C)	36	(D)	4
	(E)	Question not attempted		
23	A su	ubstance which does not occur in nat	ure bu	at is introduced by human activity into the
	envi	ronment affecting its composition is cal	lled as	
	(A)	Pollute	(B)	Pollutant
	(C)	Contaminant	(D)	Organic compound
	(E)	Question not attempted		
24		is a direct result of noise poll	ution a	and is caused by elevated blood levels over a
	long	period of time.		
	(A)	Cardiovascular problems	(B)	Hearing loss
	(C)	Hypertension	(D)	Sleep disorders
	(E)	Question not attempted		
KK(	EA64) (	)	4	P.T.O.





<b>25</b>	Redu	aced dissolved oxygen content of a body	of w	vater is known as
	(A)	Anoxia	(B)	Epoxia
	(C)	Apoxia	(D)	Нурохіа
	(E)	Question not attempted		
26	Whi	ch of the following is not an example o	f wate	er borne disease?
	(A)	Cholera	(B)	Typhoid
	(C)	Dengue	(D)	Giardiasis
	(E)	Question not attempted		
27	Whi	ch of the following is not an example of	f inor	ganic soil pollutant?
	(A)	Mercury	(B)	Arsenic
	(C)	Endosulfan	(D)	Chromium
	(E)	Question not attempted		
28	The	limiting factor in eutrophication is		
	(A)	Potassium	(B)	Nitrates
	(C)	Chlorides	(D)	Phosphates
	(E)	Question not attempted		
29	Whi	ch radioactive element is considered to a	accum	nulate in bones causing bone cancer?
	(A)	Strontium-90	(B)	Iodine-131
	(C)	Radium	(D)	Thorium
	(E)	Question not attempted		
20	T1	and the line of the state of th		<b></b>
30		permissible limit of TDS in wastewater		
	(A)	2100 mg L <sup>-1</sup>	(B)	210 mg L <sup>-1</sup>
	(C)	600 mg L <sup>-1</sup>	(D)	200 mg L <sup>-1</sup>
	(E)	Question not attempted		
31	The	dust particles, due to inertia tend to sett	tle on	the surface of the cyclone wall, occurs in
	(A)	Gravity settling chamber	(B)	Filters
	(C)	Cyclones	(D)	Electrostatic precipitators
	(E)	Question not attempted		
32	Whi	ch of the following is not an example o	f meta	al hyperaccumulator?
	(A)	Sunflower	(B)	Marigold
	(C)	Hibiscus	(D)	Mustard
	(E)	Question not attempted		

 $KK_{(EA64)}_0$  5 P.T.O.





33	Cho	osing of plants to be grown in polluted	area c	an be done based on
	(A)	APWI index	(B)	ASTI index
	(C)	APTI index	(D)	SATI index
	(E)	Question not attempted		
34	Whi	ch of the following is highly efficient in	conti	olling air pollutants?
	(A)	Internal separators	(B)	Cyclonic scrubbers
	(C)	Venturi scrubbers	(D)	Electrostatic precipitators
	(E)	Question not attempted		
35	The	plant commonly called as "Air Purifiers	" is	
	(A)	Azadirachta indica	(B)	Dalbergia sissoo
	(C)	Holoptelea integrifolia	(D)	Ficu religiosa
	(E)	Question not attempted		
36	In Ir	ndia, the Solid Waste Management Rules	were	enacted in the year
	(A)	2016	(B)	2010
	(C)	2006	(D)	2000
	(E)	Question not attempted		
37	The	most toxic component arising out of pla	astic b	ourning is
	(A)	Dioxin	(B)	Ethane
	(C)	$SO_3$	(D)	$NO_2$
	(E)	Question not attempted		
38		rmal degradation wastes in the absence of		
	(A)	Incineration	(B)	Pyrolysis
	(C)	Gasification	(D)	Composting
	(E)	Question not attempted		
39	Usef	ful product produced from solid waste m	nanage	ement is
	(A)	Ethane	(B)	Methane
	(C)	Organic acids	(D)	Ash
	(E)	Question not attempted		
40	Opti	mum C/N ratio ideal for effective comp	osting	is
	(A)	30:1	(B)	20:1
	(C)	50:1	(D)	10:1
	(E)	Question not attempted		

 $KK_{\text{(EA64)}}$  0 6 P.T.O.



41

(A) Bioreactor landfill

(C) In vessel fills



	(E)	Question not attempted		
42	A dr (A) (B) (C) (D) (E)	A barrier island or sand bar separates a Sea level rose at the end of the last gl A deep valley is created by retreating a Land sinks due to movements of the c Question not attempted	a secti acial a glacie	
43		ami Gange (Integrated Ganga Conserva r Basin Authority) programme was laun 1989 2014 Question not attempted		Mission /Programme under National Ganga n which year? 2012 2015
44		ch state in India is pioneer in making ras to avoid ground water depletion?  Arunachal Pradesh  Maharashtra  Question not attempted	(B) (D)	ater harvesting as a compulsory measure in Kerala Tamil Nadu
45		andwater movement depends on the followord, b. Permeability, c. Specific Yie a only a, b and c only Question not attempted	_	
46	Solar (A) (C) (E)	r Constant value in w/m2 Old – 1368, Revised – 1353 Old – 1353, Revised – 1361 Question not attempted	(B) (D)	Old – 1353, Revised – 1368 Old – 1369, Revised – 1353
47	energ	gies in the range 1-1.8 eV are more suit	able. is arou he cou	• • • • • • • • • • • • • • • • • • • •
KK(	EA64)_(	7	7	P.T.O.

Land fill that employ microbial process to accelerate decomposition process is

(B) Controlled dump(D) Open dumps





<b>48</b>	Fron	n houses, walls, buildings, the biogas	plant sh	hould be constructed at least spacing.			
	(A)	0.2 meter	(B)	2 meters			
	(C)	20 meters	(D)	200 meters			
	(E)	Question not attempted					
49	99 %	% of the sun's radiation is obtained up	to a w	avelength of			
	(A)	0.2 μm	(B)	0.48 μm			
	(C)	2.5 μm	(D)	4 μm			
	(E)	Question not attempted					
50	Wha	at is the Torrefaction temperature?					
	(A)	200 – 300° Celsius	(B)	300 – 400° Celsius			
	(C)	400 – 500° Celsius	(D)	500 – 600° Celsius			
	(E)	Question not attempted					
51	Wha	at is DS Solar Cells?					
	(A)	Dual Sensitive Solar Cells	(B)	Dutch-Sensitive Solar Cells			
	(C)	Dutch type Short Solar Cells	(D)	Dye-Sensitized Solar Cells			
	(E)	Question not attempted					
52	NISI	E is located at					
	(A)	Nagpur, Maharashtra	(B)	Gurugram, Haryana			
	(C)	Navi Mumbai, Maharashtra	(D)	Kolkatta, West Bengal			
	(E)	Question not attempted					
53	A.	Property that not offers resistance to	one laye	er of fluid over the adjacent layer of the fluid			
		is called as viscosity.					
	В.	Temperature does not affect viscosity	<b>7.</b>				
	C.	Unit of viscosity in CGS is poise.					
	(A)	A and C are incorrect but related.					
	(B)						
	(C)	A is correct and C is incorrect, but b	oth are	related.			
	(D)	A and C are correct and related.					
	(E)	Question not attempted					
54	Bern	noulli's equation is obtained by integra	ting Eu	ler's equation of			
	(A)	Gravity	(B)	Moisture			
	(C)	Motion	(D)	Turbomachinery			
	(E)	Question not attempted					
KK	(EA64)_(	)	8	P.T.O.			





55	A.	Orifice meter is cheaper compared to	a Vent	curimeter.
	В.	Pitot tube is a velocity measurement c	ompo	nent.
	(A)	A and B are correct.	(B)	A is correct and B is incorrect.
	(C)	A and B are incorrect.	(D)	A is incorrect and B is partially correct.
	(E)	Question not attempted		
56	Whe	en no external torque is required to rotat	e the	fluid mass, that type of flow is called as the
	(A)	Turbulent flow	(B)	Texvor flow
	(C)	Vertical flow	(D)	Vortex flow
	(E)	Question not attempted		
57	An o	object rises up when		
	(A)	Lift <weight< td=""><td>(B)</td><td>Lift&gt;weight</td></weight<>	(B)	Lift>weight
	(C)	Lift=weight	(D)	Lift=0
	(E)	Question not attempted		
58	A.	Hydraulic pumps convert electrical ene	ergy in	nto fluid pressure.
	В.	Pondage is not a kind of storage.		
	(A)	A and B are incorrect.		
	(B)	A and B are correct.		
	(C)	If B is incorrect then A also holds inco	orrect.	
	(D)	If A is correct, then B must be incorre	ct.	
	(E)	Question not attempted		
59	An e	enzyme containing a nonprotein group is	s calle	d a
	(A)	cofactor	(B)	apoenzyme
	` ′	holoenzyme	` ' '	Hydrolytic enzyme
	(E)	Question not attempted		
60	Abo	ut % of the energy stored in a	carbo	on and energy source is converted to biological
	ener	gy) during aerobic metabolism.		
	(A)	10-20	(B)	20-30
	(C)	40-50	(D)	70-80
	(E)	Question not attempted		

$$61 \qquad v = V_m - K_m \frac{v}{[S]}$$

(A) Lineweaver–Burk plot

Hanes-Woolf plot (B)

(C) Double-reciprocal plot

(D) Eadie-Hofstee plot

Question not attempted (E)





62	Identify the correct statement.						
	(A)	In the exponential phase, the cellular me maximum rates of reproduction.	etab	olic control system is set to achiev	ve .		
	(B)	The deceleration growth phase follows th	e st	ationary phase.			
	(C)	The exponential phase occurs immediately	y af	ter inoculation.			
	(D)	The stationary phase starts at the end of	the	lag phase.			
	(E)	Question not attempted					
63		In the single differential equation of growth kinetics, $dv/dS = Kv^a(1-v)^b$ ; the value of "b" for Monod model is					
	(A)	0 (E	3)	1			
	(C)	$1+(1/n) \tag{I}$	<b>)</b> )	2			
	(E)	Question not attempted					
64	If ste	eam has 0.1 kg water and 0.9 kg vapour, the	he c	quality of the steam is			
	(A)	96 % (H	3)	90 %			
	(C)	92 % (I	<b>O</b> )	94 %			
	(E)	Question not attempted					
65	A.	Bridge man gauge - Pressure measuremen	nt				
	B.	McLeod gauge - Vacuum measurement					
	C.	Vibration will not influence human efficient	ency	<i>7</i> .			
	(A)	A, B and C are incorrect. (I	3)	A and C are relevant.			
	(C)	A and B are correct. (I	))	A, B and C are correct.			
	(E)	Question not attempted					
66	Pract	tically, an adult can perceive sound above?	,				
	(A)	10 Hz (E	3)	110 Hz			
	(C)	1100 Hz (I	D)	11000 Hz			
	(E)	Question not attempted					
67	WBC	GT stands for					
	(A)	Wet Bag Green Train (E	3)	Wet Bulb Global Temperature			
	(C)	Wet Bulb Gross Temperature (I	<b>)</b> )	Wetness of Bore to Ground Truth			
	(E)	Question not attempted					
KK(E	A64)_0	10			P.T.O.		





<b>68</b>	Avei	rage surface area of human?		
	(A)	Around 1 m <sup>2</sup>	(B)	Around 2 m <sup>2</sup>
	(C)	Around 4 m <sup>2</sup>	(D)	Around 6 m <sup>2</sup>
	(E)	Question not attempted		
69		ne design process of sustainability, whi matic of the project?	ch sta	ge focuses on creating the skeletal form or
	(A)	Technical detailing	(B)	Schematic design
	(C)	Transitional model	(D)	Problem statement
	(E)	Question not attempted		
70		looks into nature as learning	resour	ces.
	(A)	Biomimicry model	(B)	Think cycle
	(C)	Open-source software	(D)	BIM tools
	(E)	Question not attempted		
71		ch of the following is correct with resper the Transitional model of design?	pect to	chronological order of activities undergone
	(A)	Documentation and specification, Design	n conce	ept, Building and construction, Post-occupancy
	(B)	Design concept, Documentation and spe	cificati	on, Building and construction, Post-occupancy
	(C)	Design concept, Building and construction	on, Do	cumentation and specification, Post-occupancy
	(D)	Design concept, Building and constructi	on, Po	st occupancy, Documentation and specification
	(E)	Question not attempted		
72		abined risk and land use approach also ronmental cleanup.	helps	to moderate the challenge of in
	(A)	Design for disassembly	(B)	How clean is clean
	(C)	One size fits all	(D)	Side-wide clean-up
	(E)	Question not attempted		
73		is responsible for regulating th	e supe	rfund cleanup process in the United States.
	(A)	Clean Air Act		
	(B)	Clean Water Act		
	(C)	Comprehensive Environmental Respon	nse, Co	ompensation and Liability Act
	(D)	Toxic Substance Control Act		
	(E)	Question not attempted		

 $KK_{(EA64)}_{0}$  11 P.T.O.





	(A) Framework convention on climate change					
	(B)	UNECE convention				
	(C)	European directive				
	(D)	Rio declaration on environment and	develop	oment		
(E) Question not attempted						
on EIA in a Transboundary context is the first multi-lateral EIA treaty.				the first multi-lateral EIA treaty.		
	(A)	Framework convention on climate c	hange			
	(B)	Rio declaration on environment and	develop	ement		
	(C)	European directive				
	(D)	UNECE convention				
	(E)	Question not attempted				
76		ld be done according to	and Ha	ndling) Rules 2011, recycling of the plastic		
	(A)	IS/ISO 14852:1991	(B)	IS/ISO 17088 : 2008		
	(C)	IS 9833 : 1981	(D)	IS 14534: 1998		
	(E)	Question not attempted				
77	Choo	ose the agreement/convention/protocol	, which	is legally binding on the signatory countries		
	(A)	Paris Agreement	(B)	Basel Convention		
	(C)	Kyoto protocol	(D)	Montreal protocol		
	(E)	Question not attempted				
<b>78</b>	Eco-	labelling is governed by				
	(A)	ISO 14000	(B)	ISO 14001		
	(C)	ISO 14010	(D)	ISO 14020		
	(E)	Question not attempted	` '			
79	Assertion (A): When quantitative probabilistic risk assessment is performed on hazardous waste sites they usually turn out to be of relatively low threats.  Reason (R): In hazardous waste sites the chance of exposure is low because of isolation of drinking water supplies and prevention of access  (A) Both (A) and (R) are true and (R) is the correct explanation of (A).  (B) Both (A) and (R) are true and (R) is not correct explanation of (A).  (C) (A) is true, but (R) is false.  (D) (A) is false, but (R) is true.  (E) Question not attempted					
KK(E	EA64)_C	)	12	P.T.O.		

A set of principles which provide guidance on achieving sustainable development implied by





80	Whi (A)	ch of the following fall under the cates  Dams and reservoirs	gory B (B)	according to World Bank classification?  Industrial plants			
	(C)	Renewable energy	(D)	Hazardous material production plant			
	(E)	Question not attempted	· /	1			
81	ISO	14001 deals with					
	(A)	Guidelines for environmental auditing	5				
	(B)	Specification for Environmental Mana	_	t system			
	(C)	Environmental performance evaluation					
	(D)	Specification for Environmental decla	ration				
	(E)	Question not attempted					
82		` `	_	ement) Rule was implemented in the year			
	(A)	1996	(B)	1998			
	(C)	2000	(D)	2002			
	(E)	Question not attempted					
83		-	tional s	standard, which is being applied			
		some regularity in many countries.		TGC 44004			
	(A)		(B)	ISO 14001			
	(C)	ISO 17025	(D)	ISO 27001			
	(E)	Question not attempted					
84	Asse	Assertion (A): A large number of districts in states of India have become water-stressed.					
	Reas	son (R): The population in India has in	creased	appreciably since independence.			
	(A)	Both (A) and (R) are true and (R) is	the co	rrect explanation of (A).			
	(B)	Both (A) and (R) are true and (R) is	not co	rrect explanation of (A).			
	(C)	(A) is true, but (R) is false.					
	(D)	(A) is false, but (R) is true.					
	(E)	Question not attempted					
85	By t	he year 2030, India government has a	new ta	rget of solar power generation of			
	(A)	60 GW	(B)	75 GW			
	(C)	100 GW	(D)	500 GW			
	(E)	Question not attempted					
86	A ri	ver flowing at 20 m <sup>3</sup> /s has a tributary f	eeding	into it with a flow rate of 5 m <sup>3</sup> /s. Upstream			
				tion is 5 mg/l in the river and 10 mg/l in the			
		stary. Assuming fluoride to be conserventary. Assuming fluoride to be conserventration in the river is	ative s	ubstance and rapid mixing in the river, the			
	(A)	6 mg/l	(B)	7.5 mg/l			
	(C)	8.5 mg/l	(D)	9 mg/l			
	(E)	Question not attempted	(-)	<b>3</b> -			
KK	EA64) (	)	13	P.T.O.			





87	The efficiency and effectiveness of a technique in reducing the mobility and toxicity of waste is called as								
	(A)	Criteria for Energy Efficiency	(B)	Criteria for Treatability					
	(C)	Criteria for Social Safety	(D)	Criteria for Waste Streams					
	(E)	Question not attempted							
88	The Green Climate Fund recently set up to help poor countries adapt to climate impacts envisages financial support to the extent of in dollar per year								
	(A)	3 billion	(B)	10 billion					
	(C)	30 billion	(D)	100 billion					
	(E)	Question not attempted							
89	The first level of the Six Sigma Certification process is								
	(A)	Black Belt Certification	(B)	Green Black Certification					
	(C)	Yellow Belt Certification	(D)	White Belt Certification					
	(E)	Question not attempted							
90	ISO	9000:2015 deals with							
	(A)	Quality Management Systems - Requir	emen	ts					
	(B)	Quality Management Systems - Fundament	menta	ls and Vocabulary					
	(C)	Quality Management - Quality of an Org	ganiza	tion - Guidance to Achieve Sustained Success					
	(D)	Guidelines for Auditing Management S	Systen	ns					
	(E)	Question not attempted							
91	Four-cylinder engine is an example of								
	(A)	Reliability serial system	(B)	Reliability parallel system					
	(C)	Reliability serial-parallel system	(D)	Reliability parallel-serial system					
	(E)	Question not attempted							
92	The Digital Elevation Model is best represented using								
	(A)	Vector Data Models	(B)	Raster Data Models					
	(C)	Coverage Data Structure	(D)	Non-Topological Data Structure					
	(E)	Question not attempted							
93	Eco	nomic order quantity is obtained by							
	(A)	Minimizing the total inventory cost							
	(B)	Maximizing the total inventory cost							
	(C)	Inventory cost is neither maximum nor	r mini	mum					
	(D)	Neglecting the total inventory cost							
	(E)	Question not attempted							





KK(E	EA64)_(	) 1	5	P.T.O.						
	(E)	Question not attempted								
	(C)	m+n-1	(D)	m+n+1						
	(A)	m + n	(B)	m * n						
100	posit	tive allocations are		ows and n-columns is feasible if number of						
	(E)	Question not attempted								
	(C)	Both A and B are correct.	(D)	Both A and B are incorrect.						
	(A)	A is correct and B is incorrect.	` ′	A is incorrect and B is correct.						
	B.	PERT is a must for controlling time w	-							
99	A.	CPM is used to control cost and time.		1 .						
	(-)	(								
	(E)	Question not attempted		seare analog						
	(A) (C)	process analog	(D)	scale analog						
	(A)	linear model.	(B)	mathematical						
98	The		ow, an	d heat / electrical / solute flow is used in						
	(E)	Question not attempted								
	(C)	Poisson distribution	(D)	Discrete Uniform distribution						
	(A)	Bernoulli distribution	(B)	Gaussian distribution						
97	Marl	kovian queuing models follows								
	(2)	Zuszwan nas anomptoa								
	(E)	Question not attempted	inical							
	(D)									
	(C)	Both objective and constraint are linear	r func	ction						
	(A) (B)	Objective function is linear function								
JU	(A)	All constraints are linear function	r prog	ramming proofers is						
96	An a	optimization problem is said to be linea	r prog	romming problem if						
	(E)	Question not attempted								
	(C)	key element (Pivot Element)	(D)	Minimum ratio						
	(A)	key row and then key column	(B)	key column and then key row						
95	In the Dual Simplex method in OR, first is to identify									
	(E)	Question not attempted								
	(D)									
	(C)									
	(B)	Values of some basic variables are integers and some are not integers								
	(A)	s are fractions								

A mixed integer programming problem is one in which





#### **SPACE FOR ROUGH WORK**







### Assistant Environmental Engineer in Haryana State Pollution Control Board

(Advt No 24/2023)

(Held on 07.04.2024)

#### **Master Answer Key for filling Objections (By Candidates)**

Q.No.	Ans Key	Q.No.	Ans Key		Q.No.	Ans Key	Q.No.	Ans Key
1	A	26	С		51	D	76	D
2	D	27	С		52	В	77	D
3	С	28	D		53	D	78	В
4	В	29	A		54	С	79	A
5	D	30	A	-	55	A	80	С
6	A	31	A	-	56	D	81	В
7	С	32	С		57	В	82	С
8	С	33	С		58	В	83	В
9	A	34	D		59	С	84	A
10	С	35	A		60	С	85	D
11	D	36	A		61	D	86	A
12	С	37	A		62	A	87	В
13	В	38	В		63	D	88	D
14	A	39	В		64	D	89	D
15	A	40	A		65	С	90	В
16	A	41	A		66	D	91	В
17	В	42	D		67	В	92	В
18	С	43	A		68	В	93	A
19	A	44	D		69	В	94	С
20	A	45	D		70	A	95	A
21	A	46	В		71	В	96	С
22	D	47	A		72	С	97	С
23	С	48	В		73	С	98	D
24	С	49	D		74	D	99	С
25	A	50	A		75	D	100	С