पर्यवेक्षकांच्या सूचनेविना हे सील उघडू नये

वेळ: 1 ( एक ) तास

किन्छ भूवेसानिक योगणा गट व'2013 वि. १४ भूल, २०१3

शहायक भूवें ज्ञानिक भेरा १५

प्रश्नपुस्तिका क्रमांक

BOOKLET NO.

प्रश्नपुस्तिका

एकूण प्रश्न : 100

चाळणी परीक्षा/SCREENING TEST

एकूण गुण : 200

个

शेवटचा अंक

## सूचना

(1) सदर प्रश्नपुस्तिकेत <u>100</u> अनिवार्य प्रश्न आहेत. उमेदवारांनी प्रश्नांची उत्तरे लिहिण्यास सुरुवात करण्यापूर्वी या प्रश्नपुस्तिकेत सर्व प्रश्न आहेत िकंवा नाहीत याची खात्री करून घ्यावी. असा तसेच अन्य काही दोष आढळल्यास ही प्रश्नपुस्तिका समवेक्षकांकडून लगेच बदलून घ्यावी.

- (2) आपला परीक्षा-क्रमांक ह्या चौकोनांत न विसरता बॉलपेनने लिहावा.
- (3) वर छापलेला प्रश्नपुस्तिका क्रमांक तुमच्या उत्तरपत्रिकेवर विशिष्ट जागी उत्तरपत्रिकेवरील सूचनेप्रमाणे न विसरता नमूद करावा.
- (4) या प्रश्नपुस्तिकेतील प्रत्येक प्रश्नाला 4 पर्यायी उत्तरे सुचिवली असृन त्यांना 1, 2, 3 आणि 4 असे क्रमांक दिलेले आहेत. त्या चार उत्तरांपैकी सर्वात योग्य उत्तराचा क्रमांक उत्तरपित्रकेवरील सूचनेप्रमाणे तुमच्या उत्तरपित्रकेवर नमूद करावा. अशा प्रकारे उत्तरपित्रकेवर उत्तरक्रमांक नमूद करताना तो संबंधित प्रश्नक्रमांकासमोर छायांकित करून दर्शविला जाईल याची काळजी ध्यावी. ह्याकरिता फक्त काळ्या शाईचे बॉलपेन वापरावे, पेन्सिल वा शाईचे पेन वापरू नये.
- (5) सर्व प्रश्नांना समान गुण आहेत. यास्तव सर्व प्रश्नांची उत्तरे द्याबीत. घाईमुळे चुका होणार नाहीत याची दक्षता घेऊनच शक्य तितक्या वेगाने प्रश्न सोडवावेत. क्रमाने प्रश्न सोडविणे श्रेयस्कर आहे पण एखादा प्रश्न कठीण वाटल्यास त्यावर वेळ न घाळिवता पुढील प्रश्नांकडे वळावे. अशा प्रकारे शेवटच्या प्रश्नापर्यंत पोहोचल्यानंतर वेळ शिल्लक राहिल्यास कठीण म्हणून वगळलेल्या प्रश्नांकडे परतणे सोईस्कर ठरेल.
- (6) उत्तरपत्रिकेत एकदा नमूद केलेले उत्तर खोडता येणार नाही. नमूद केलेले उत्तर खोडून नव्याने उत्तर दिल्यास ते तपासले जाणार नाही.
- (7) प्रस्तुत परीक्षेच्या उत्तरपत्रिकांचे मूल्यांकन करताना उमेदवाराच्या उत्तरपत्रिकेतील योग्य उत्तरांनाच गुण दिले जातील. तसेच ''उमेदवाराने वस्तुनिष्ठ बहुपर्यायी स्वरूपाच्या प्रश्नांची दिलेल्या चार उत्तरांपैकी सर्वात योग्य उत्तरेच उत्तरपत्रिकेत नमूद करावीत. अन्यथा त्यांच्या उत्तरपत्रिकेत सोडविलेल्या प्रत्येक चार चुकीच्या उत्तरांसाठी एका प्रश्नांचे गुण वजा करण्यात येतील''.

## ताकीद

ह्या प्रश्नपत्रिकेसाठी आयोगाने विहित केलेली बेळ संपेपर्यंत ही प्रश्नपुस्तिका आयोगाची मालमत्ता असून ती परीक्षाकक्षात उमेदवाराला परीक्षेसाठी वापरण्यास देण्यात येत आहे. ही बेळ संपेपर्यंत सदर प्रश्नपुस्तिकेची प्रत/प्रती, किंवा सदर प्रश्नपुस्तिकेतील काही आशय कोणत्याही स्वरूपात प्रत्यक्ष वा अप्रत्यक्षपणे कोणत्याही व्यक्तीस पुरविणे, तसेच प्रसिद्ध करणे हा गुन्हा असून अशी कृती करणाऱ्या व्यक्तीवर शासनाने जारी केलेल्या ''परीक्षांमध्ये होणाऱ्या गैरप्रकारांना प्रतिबंध करण्याबाबतचा अधिनियम-82'' यातील तरतुदीनुसार तसेच प्रचलित कायद्याच्या तरतुदीनुसार कारवाई करण्यात येईल व दोषी व्यक्ती कमाल एक वर्षाच्या कारावासाच्या आणि/किंवा रुपये एक हजार रकमेच्या दंडाच्या शिक्षेस पात्र होईल.

तसेच ह्या प्रश्नपत्रिकेसाठी विहित केलेली वेळ संपण्याआधी ही प्रश्नपुस्तिका अनिधकृतपणे बाळगणे हा सुद्धा गुन्हा असून तसे करणारी व्यक्ती आयोगाच्या कर्मचारीवृंदापैकी, तसेच परीक्षेच्या पर्यवेक्षकीयवृंदापैकी असली तरीही अशा व्यक्तीविरूद्ध उक्त अधिनियमानुसार कारवाई करण्यात येईल व दोषी व्यक्ती शिक्षेस पात्र होईल.

पुढील सूचना प्रश्नपुस्तिकेच्या अंतिम पृष्ठावर पहा

कच्च्या कामासाठी जागा /SPACE FOR ROUGH WORK

1.	_	roject was ord 1 of project wa		oe closed b	y the	Tamil	Nadu Poll	ution	Contr	ol Board.	What
	(1)	Thermal pov		ect.	(2)	Hvc	lel power p	project			
	(3)	Copper smel	, ,		(4)	•	mic power	,	:t		
2.		centre has der ich project is th		ds to the la	rgest i	rrigat	ion project	in the	state	of Mahara	ashtra.
	(a)	Koyna Dam	(b)	Bhandar	dara	(c)	Gosikhur	:d	(d)	Vaitarna	a
	Whi	ich of the answ	ver is <b>cor</b>	rect?							
	(1)	(a) only	(2)	(b) only		(3)	(c) only	(4)	(b) a	and (d) on	ly
3.	The	new strategic	naval ba	se being bu	ilt on	the ea	st coast of	lndia i	s:		
	(a)	Project Samı	adra		(b)	Proj	ect Padma				
	(c)	Project Rohii	ni		(d)	Proj	ect Sagar				
	Whi	ich of the abov	e answei	rs is <b>correc</b>	t ?						
	(1)	only (a)	(2)	only (b)		(3)	only (c)	(4)	Nor	ne of the al	bove
4.	The (1) (3)	Governor retu The Private I LBT Bill		O	d recer (2) (4)	Wat	Which bill were Conserved Registrat	ation	Bill		
5.	The Dr.	in the blank w Western Ghat K. Kasturirang es of Rajasthan, N	s has be gan head 	en declared ed panel.	d ecolo The ar	ogicall rea of	y sensitive some 60,0	00 sq.k	cm Ís	spread ov	er the
	(2)	Gujarat, Mal									
	(3)	Gujarat, And								u.	
	(4)	Rajasthan, M	Iaharash	tra, Karnat	taka, K	Cerala	and Tamil	Nadu	1.		
6.		o is the co-own IPL spot fixing		Rajasthan	Royals	team	who has b	een cal	lled fo	or question	ing in
	(a)	Vijay Mallya	l		(b)	Srin	ivasan				
	(c)	Raj Kundra			(d)	Sido	lharth Triv	edi			
	Wh	ich of the optic	ns given	above is <b>c</b>	orrect	?					
	(1)	(a) only	(2)	(c) only		(3)	(b) only		(4)	(d) only	
7.	The	Wikileaks fou	nder Juli	an ∆ssange	e, has l	been g	granted ass	ylum t	y wh	ich countr	y ?
	(1)	Iceland	(2)	Equador		(3)	Russia		(4)	China	

	Indian Navy's Lt. 1 in a Navy Boat	, solo,		-			dian to d	circ	um navigate the
			non-stop	and in		_			
(1)	Navy Boat			aria a	nassis	ted.			
		(2)	Water Boa	nt	(3)	Sailboat	(	4)	Neon Boat
State	whether the stat	ement	given belo	w is c	orrect	or not ?			
'Noı	n-Governmental o	organi	sation rece	iving	alloca	ition or pro	vision (	of f	unds, has to be
treat	ed as a public au	thority	under sec	tion 2	! (h) o	f Right to In	ıformati	on	Act, 2005'.
(1)	Correct			(2)	Wro	ng			
(3)	Partly correct an	nd par	tly wrong	(4)	Can'	t say			
The	Right to Informat	ion :				na .			
(a)	acts as a brake o	n the	abuse of po	ower l	by pul	olic officials.			
(b)	facilitates the ex the country.	posur	e of errors	in the	gove	rnance and a	adminis	trat	ion of justice of
(c)	it helps to bring	transp	arency and	l acco	untabi	lity in the w	orking	of p	bublic authority.
(d)	it helps to breac	h priv	acy of indiv	vidual	l.	•		_	•
Whi	ch of the above st	tateme	ents are cor	rect?					
(1)	only (a), (b) and	(c)		(2)	only	(b), (c) and	(d)		
(3)				(4)	-				
State	whether True of	False							
Daro	y's law does not	expres	ss the flow	throu	gh po	rous media.			
	true	1							
(3)	neither true nor	false		(4)					
Wha	it is a watershed	 ?	-						
(1)	it is a geologic a	rea th	at drains w	ater t	о а со	mmon poin	t.		
(2)	it is a geograph	ic area	that drain	s wate	er to a	common pe	oint.		
(3)	it is a geograph	ic area	that drain	s wat	er awa	ay from eacl	h other.		
(4)	none of the abo	ve.							
Fill	in the blank with	the co	rrect option	٦.	<u>.</u>				
With	ndrawing ground	water	at a locatio	n adja	icent t	o a river or l	lake so t	that	lowering of the
grou	ındwater level wi	ll	wa	ter to	enter	the ground	from th	ne s	urface source.
(1)	induce	(2)	incidental	•	(3)	spreading	(	4)	pit
Wha	nt is the upper su	rface c	of zone of sa	aturat	ion te:	rmed as ?			- 1
(1)	saturation level			(2)	grou	nd leveI			
(3)	water table			(4)	•	of these			
	(1) (3) The (a) (b) (c) (d) Whi (1) (3) State Darc (1) (3) Wha (1) (2) (3) (4) Fill is With groun (1) Wha	(1) Correct (3) Partly correct ar  The Right to Informat (a) acts as a brake of (b) facilitates the exthe country. (c) it helps to bring (d) it helps to breac Which of the above st (1) only (a), (b) and (3) only (c), (d) and  State whether True of Darcy's law does not (1) true (3) neither true nor  What is a watershed (1) it is a geograph (3) it is a geograph (3) it is a geograph (4) none of the above  Fill in the blank with Withdrawing ground groundwater level wi (1) induce  What is the upper sur	(1) Correct (3) Partly correct and par  The Right to Information: (a) acts as a brake on the (b) facilitates the exposure the country. (c) it helps to bring transp (d) it helps to breach priv Which of the above stateme (1) only (a), (b) and (c) (3) only (c), (d) and (a)  State whether True of False Darcy's law does not expres (1) true (3) neither true nor false  What is a watershed? (1) it is a geographic area (3) it is a geographic area (4) none of the above.  Fill in the blank with the co Withdrawing ground water groundwater level will (1) induce (2)  What is the upper surface of	<ol> <li>Correct</li> <li>Partly correct and partly wrong</li> <li>The Right to Information:         <ul> <li>(a) acts as a brake on the abuse of postilitates the exposure of errors the country.</li> <li>(b) facilitates the exposure of errors the country.</li> <li>(c) it helps to bring transparency and the country.</li> <li>(d) it helps to breach privacy of individed which of the above statements are cored in the constant of the c</li></ul></li></ol>	(1) Correct (2) (3) Partly correct and partly wrong (4)  The Right to Information: (a) acts as a brake on the abuse of power 1 (b) facilitates the exposure of errors in the the country. (c) it helps to bring transparency and according it helps to breach privacy of individual Which of the above statements are correct? (1) only (a), (b) and (c) (2) (3) only (c), (d) and (a) (4)  State whether True of False.  Darcy's law does not express the flow through (1) true (2) (3) neither true nor false (4)  What is a watershed? (1) it is a geologic area that drains water that	(1) Correct (2) Wro (3) Partly correct and partly wrong (4) Can'  The Right to Information: (a) acts as a brake on the abuse of power by put (b) facilitates the exposure of errors in the gover the country. (c) it helps to bring transparency and accountable (d) it helps to breach privacy of individual.  Which of the above statements are correct? (1) only (a), (b) and (c) (2) only (3) only (c), (d) and (a)  State whether True of False.  Darcy's law does not express the flow through por (1) true (2) false (3) neither true nor false  What is a watershed? (1) it is a geographic area that drains water to a co (2) it is a geographic area that drains water to a (3) it is a geographic area that drains water awa (4) none of the above.  Fill in the blank with the correct option.  Withdrawing ground water at a location adjacent to groundwater level will water to enter (1) induce (2) incidental (3)  What is the upper surface of zone of saturation ter	(1) Correct (2) Wrong (3) Partly correct and partly wrong (4) Can't say  The Right to Information: (a) acts as a brake on the abuse of power by public officials. (b) facilitates the exposure of errors in the governance and the country. (c) it helps to bring transparency and accountability in the will distribute the above statements are correct? (1) only (a), (b) and (c) (2) only (b), (c) and (3) only (c), (d) and (a)  State whether True of False.  Darcy's law does not express the flow through porous media. (1) true (2) false (3) neither true nor false  What is a watershed? (1) it is a geologic area that drains water to a common poin (2) it is a geographic area that drains water to a common poin (3) it is a geographic area that drains water to a common poin (4) none of the above.  Fill in the blank with the correct option.  Withdrawing ground water at a location adjacent to a river or ingroundwater level will water to enter the ground (1) induce (2) incidental (3) spreading  What is the upper surface of zone of saturation termed as?	(1) Correct (2) Wrong (3) Partly correct and partly wrong (4) Can't say  The Right to Information: (a) acts as a brake on the abuse of power by public officials. (b) facilitates the exposure of errors in the governance and administ the country. (c) it helps to bring transparency and accountability in the working (d) it helps to breach privacy of individual.  Which of the above statements are correct? (1) only (a), (b) and (c) (2) only (b), (c) and (d) (3) only (c), (d) and (a)  State whether True of False.  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Which of the above statements are correct?  (1) only (a), (b) and (c) (2) only (b), (c) and (d)  (3) only (c), (d) and (a) (4) only (a), (c) and (d)  State whether True of False.  Darcy's law does not express the flow through porous media.  (1) true (2) false  (3) neither true nor false (4) none of these  What is a watershed?  (1) it is a geographic area that drains water to a common point.  (2) it is a geographic area that drains water to a common point.  (3) it is a geographic area that drains water away from each other.  (4) none of the above.  Fill in the blank with the correct option.  Withdrawing ground water at a location adjacent to a river or lake so that groundwater level will water to enter the ground from the so (1) induce (2) incidental (3) spreading (4)  What is the upper surface of zone of saturation termed as?

15.	The	nplete the senten fine - grained m abstantial release	aterial	s, yield littl	le wate	er whe		oarse	e - grai	ined r	naterials, permit
	(1)	aquifer	(2)	aquiclude		(3)		fard		(4)	aquifuge
16.		at is the correct o	-					_			
		flow rate through the leading of the				oporti	ional t	o the	head	loss	and
	(1)	directly	(2)	same		(3)	inve	rsely		(4)	none of above
17.	The	term piezometric	c surfa	ce is relate	d to w	hich t	ype of	aqui	fer ?	-	
	(1)	shallow aquife	r		(2)	sem	i - con	fined	aquif	er	
	(3)	confined aquife	er		(4)	non	e of th	ese			
18.	Whi	ich of the followi	ng roc	k bodies or	forma	ations	act as	an ac	quiclu	de ?	
	(1)	sandstone	(2)	limestone	<b>:</b>	(3)	basa	lt		(4)	clay
<del></del> 19.	Whi	ich of the followi	ng is r	not a femic	miner	al ?					
	(1)	diopside	(2)	olivine		(3)	apat	ite	(4)	orth	oclase
20.		erial photograph									
		ch may otherwise	e resul	-		of the					
	(1)	Filters		(2) Len	iS		(3)	Can	nera	(4)	None
21.	Wat	er released under	r press	sure from w	vhat k	ind of	aquife	er res	ults in	to Ar	tesian Springs ?
	(1)	Unconfined	(2)	Confined		(3)	Semi	iconfi	ined	(4)	Non-confined
22.	Fill	in the blank with	one o	f the optior	ns give	n belo	ow.				
	Hyc	drofracturing is d	one by	injection o	of wate	er with	n		_ pres	sure i	n the borewells.
	(1)	low	(2)	medium		(3)	high			(4)	no
23.	Wha	at is a Littoral Zo	ne of	an Ocean ?						-	
	(1)	The zone of de	ep Sea	floor.							
	(2)	The zone inclu	des ar	ea between	the lo	w tide	e and	conti	nental	shelf	margin.
	(3)	The zone inclu	des ar	ea between	lamir	narian	zone a	and c	ontine	ntal s	shelf.
	(4)	The area betwe	en the	levels of the	ne higl	n tide	and th	ie lov	v tide.		

24.	<ul><li>(1) Alkaline and saline lakes</li><li>(3) Formed by ocean action</li></ul>	(2) . (4)	Vol	estern Rajputar canic lake lic lake	ia ?	
25.	In what formations are tubewells gen and intake section of slotted casing pip	se wit	h grav	vel packing?		0,1
	(1) granite (2) quartzite		(3) ——-	basalt 	(4)	alluvial
26.	Amongst following bodies, two are correct option from the following:	oncor	dant	and two are d	iscordar	nt. Identify the
	(1) Sills, dykes, laccoliths, lopoliths		(2)	dykes, stocks,		•
	(3) batholiths, volcanic vents, dykes		(4)	lopoliths, pha	coliths,	laccoliths, sills
27.	Fill in the blank with the <b>correct</b> optio	n :			<u>-</u>	
	West (1936) made detailed studies of th	ne rock	ks in Γ	Deolapar part of	the belt	and deciphered
	the existence of a structur	re.	(0)	.1 .	445	,
	(1) nappe (2) fold		(3)	overthrust	(4)	dome
28.	Basalts are what kind of lavas in which occur in approximately equal amounts		oclase	felspar and the	group o	f mafic minerals
	(1) mafic (2) mafelsic		(3)	felsic	(4)	salic
 29.	How is the stage of groundwater deve		- —— ent in	a watershed ca	 dculated	7
_,.		•	C111 111	a wateroned co	. ie a ia te e	
	(1) = $\frac{\text{existing recharge for all uses}}{\text{Gross G.W. draft}}$	× 100				
	existing Gross G.W. draft for a		s			
	$(2) = \frac{\text{Net annual G.W. availability}}{\text{Net annual G.W. availability}}$		$-\times 1$	00		
	$(3) = \frac{\text{Draft}}{\text{Balance}} \times 100$					
		ity				
	$(4) = \frac{\text{Net annual } G.W. \text{ availabil}}{\text{existing Gross } G.W.  draft for a state of the state of the$	all use	- × 1	100		
	existing Gross G.W. drait for t	TI COX.	.,			
30.	What are the social aspects in ground	water	mana	igement ?		<u> </u>
	(1) Groundwater modelling					
	(2) Use of solar energy					
	(3) Use of G.I.S.					
	(4) Community participation and management	linvo	lvem	ent of consum	ers in	water resource

31.		ne soil ?	ring which other	factor, by and large c	letermines, the character
	(1)	Environment	(2)	Rainfall	
	(3)	Atmosphere	(4)	Rock composition	
32.	Fill i	in the blank with one o	f the options give	n below.	
		hed water bodies occi indwater by relatively	-	-	eparated from the main extent.
	(1)	permeable (2)	impermeable	(3) jointed	(4) porous
33.	Wha	at for are the Artificial	Recharge Projects	designed ?	
	(1)	maintain or augment	the natural grou	indwater.	
	(2)	to combat adverse co vourable salt balance a		. 0	g of groundwater level,
				mirusion.	
	(3) (4)	to provide subsurface all of the above.	e storage.		
	( <del>1</del> )	an of the above.			
34.	Wha calle		hat are deposite	d along the margin	ns of glaciated valleys
	(1)	Ground moraine	(2)	Lateral moraine	
	(3)	Medial moraine	(4)	End moraine	
<del></del> 35.	Fill	in the blank :			
	Gne				nation of schistose and eral composition and in
	text	ure.			
	(1)	maculose	(2)	cataclastic	
	(3)	porphyroclastic	(4)	granulose	
36.	Wha	at is a crescent shaped	dune with taperi	ng arms known as ?	
	(1)	slipface	(2)	longitudinal dune	
	(3)	Barchan	(4)	loess	
37.	Fill	in the blanks appropria	ntely :		
	The	block above the fault wall.	is called	wall, and block	k below the fault is the

	, , , , , ,	at is the waveleng	-	0		•				*
	(1)	0.4 to 0.5 μm			(2)	0.2 t	to 0.4 μm			
	(3)	0.4 to 0.6 μm			(4)	0.4 t	:0 0.7 μm			
39.	Hov	v is the second or	der st	ream formed	! ?					
	(1)	Where one first	orde	r and one sec	cond	order	stream m	eet.		
	(2)	Where two firs	t orde:	r streams me	et.					
	(3)	Where two seco	and or	der streams	meet					
	(4)	All of these.								
40.		nt does the intrus ding result in ?	ion of	magma into	more	or le	ss vertical	fissure	s whi	ch cut across the
	(1)	Sills	(2)	Phacoliths		(3)	Dykes	(4)	Cur	rent bedding
 41.	Whi	ch of the following	—  — ng are	the exogene	tic ge	eomor	phic proce	esses ?	<del></del>	
	(1)	Diastrophism	~	Volcanism	-				(4)	None of these
42.		in the blank appr	•	•	1		1			
42.	Mar If a mon	in the blank appr ny meanders cont flood occurs wh nentum of the ind ne cut-off a deser dome	inue t ien on reasec	o swell out i lly narrow n I flow is likel	eck ( ly to (	of lan carry	d is left b the stream	etween across	adjo the n	ining loops, the
42.	Mar If a mon of th (1)	ny meanders cont flood occurs wh nentum of the inc ne cut-off a deser	inue t len or creased ted cl (2)	o swell out is ily narrow n I flow is likel nannel is left, meander	eck ( ly to (	of lancarry ning (3)	d is left b the stream fan	etween across (4)	adjo the no an o	ining loops, the eck. On the side
	Mar If a mon of th (1)	ny meanders cont flood occurs wh nentum of the inc ne cut-off a deser dome	inue t len or creased ted cl (2)	o swell out is ily narrow n I flow is likel nannel is left, meander	eck ( ly to (	of lancarry ning (3)	d is left b the stream fan	etween across (4)	adjo the no an o	ining loops, the eck. On the side
	Mar If a mon of th (1) Wha	ny meanders cont flood occurs wh mentum of the inc ne cut-off a deser dome	inue t den on creased ted cl (2) le limi (2)	o swell out it ily narrow n I flow is likel nannel is left, meander t of chloride 125	y to o	of lan carry ning (3) ater ir (3)	d is left b the stream fan n mg/l to 250	etween across (4) be pota	an comble?	ining loops, the eck. On the side
43.	Mar If a mon of th (1) Wha	ny meanders cont flood occurs wh mentum of the inc ne cut-off a deser dome at is the acceptable	trans	o swell out it ily narrow n I flow is likel nannel is left, meander t of chloride 125	forn in w	of lan carry ning (3) ater ir (3)	fan  mg/l to  250  bearing fo	etween across (4) be pota	an control and con	ining loops, the eck. On the side
43.	Mar If a mon of th (1) Wha (1)	ny meanders cont flood occurs wh mentum of the inc ne cut-off a deser dome at is the acceptable 100	trans (2)	o swell out it ily narrow n I flow is likel nannel is left, meander t of chloride 125 mit water of specific yie	forn in w	of lan carry ning (3) ater ir (3)	fan  mg/l to  250  bearing fo	etween across (4) be pota	an control and con	ining loops, the eck. On the side ox-bowlake  500  ed ?
43.	Marr If a more of the (1)  What (1)  What (1)  Fill Dev	ny meanders cont flood occurs whenentum of the income dome at is the acceptable 100 at is the ability to porosity	ten on creased (2)  le limit (2)  trans (2)  copriate cy's la	o swell out it ily narrow not flow is likely narrow not flow is left, meander to f chloride 125 mit water of specific yiestely.	in wather	of lan carry ning (3) atter ir (3) water (3)	fan fan 250 bearing fo	etween across (4) be pota ormation	an comble ? (4) n calle	ining loops, the eck. On the side ox-bowlake  500  ed ?  none of these
43.	Marr If a more of the (1)  What (1)  What (1)  Fill Dev	ny meanders cont flood occurs whenentum of the income dome at is the acceptable 100 at is the ability to porosity in the blank apprint iations from Darce	ten on creased (2)  le limit (2)  trans (2)  copriate cy's la	o swell out it ily narrow not flow is likely narrow not flow is left, meander to f chloride 125 mit water of specific yiestely.	in wather	of lan carry ning (3) atter ir (3) water (3)	fan fan 250 bearing fo	etween across (4) be pota ormation	an comble ? (4) n calle	ining loops, the eck. On the side ox-bowlake  500  ed ?  none of these
43.	Mar If a mon of the (1)  What (1)  What (1)  Fill: Dev as no (1)	ny meanders cont flood occurs when the necessity to be a pumped well are pumped well flood occurs when the street and the street acceptable at its the ability to porosity.	trans (2) trans (2) trans (2) trans (2) topriat (2)	o swell out it ally narrow not flow is likely narrow is likely named is left, meander to footboride 125 mit water of specific yies sely.  w can occur gentle	in wather	of lan carry ning (3) atter ir (3) water (3) (3)	fan fan 250 bearing fo permeab	etween across (4) be pota ormationality vdrauli	an comble ? (4)  c grad (4)	ining loops, the eck. On the side eck. On the side ex-bowlake 500 ed? none of these lients exist, such

<b>4</b> 7.		at is the conven					harge		II. Jane		Al- au a
	(1)	BBT	(2)	FSC	(3)	HF		(4)	Undergi	ound ban	unara 
48.		at may be defir smitted through									osity is
	(1)	Transmissivity	yТ		(2)	Por	osity				
	(3)	Permeability			(4)	Cap	acity				
49.		at will the flow er level contour		•	-	ular t	o the	conve	x and cor	ncave port	ions of
	(1)	steep slope			(2)	vall	ey				
	(3)	hills			(4)	dire	ection	of mo	vement of	groundwa	ater
50.	In B	handara triangl	e whicl	n of the fo	ollowing	Pre-	— Cambr	ian su	iccession i	s observed	1?
	(1)	Khairagarh se	ries, Na	ndgaon s	series, Sa	akoli :	series,	Amga	on series		
	(2)	Khairagarh se	ries, Na	andgaon s	series, Sa	ausar	series,	Sako	li series		
	(3)	Sakoli series,	Sausar s	series, Na	ndgon s	eries,	Amga	on se	ries		
	(4)	Amgaon serie	s, Nanc	lgaon ser	ies, Kha	iragar	h seri	es, Sal	coli series		
51.		at is defined as t unit surface are			iter that	an aq	uifer r	elease	s from or	takes into	storage
	(1)	Storage coeffi	cient		(2)	Spe	cific re	etentic	n		
	(3)	Specific yield			(4)	Spe	cific c	apacit	y		
<u> </u>	Fill	in the blank wit	th the c	orrect opt	tion.			_			
	Por	osity of rock is of the v		sure of the					or voids	expressed	as the
	(1)	addition	(2)	substra	ction	(3)	mul	tiplica	tion (4)	ratio	
53.	Und	ler what pressu	re in th	e zone of	saturati	on all	inters	stices a	are filled v	with water	?
	(1)	atmospheric			(2)	hyd	irostat	ic			
	(3)	barometric			(4)	-	e of th		ve		
54.		at formations the			^		of cons	iderin	g their lith	nology, hor	rizontal
	(1)	Vindhyan	(2)	Cudda	pah	(3)	Karı	nool	(4)	Delhis	

CO2			10	A
55.	Wha	at do you mean by SAR ?		
	(1)	Sodium - Aluminium Ratio	(2)	Sodium - Absorption Ratio
	(3)	Sodium - Adsorption Ratio	(4)	Sulphate - Absorption Ratio
56.	Wha	at do you understand by area of	influen	ce ?
	(1)	The area beneath influent drain		
	(2)		_	contours are modified by pumping.
	(3)	The area beneath which ground		
	(4)	None of these		
<u></u> 57.	Fill	in the blanks appropriately.		
			togethe	r with flow lines, form useful data for locating
		, 0	_	of groundwater; while concave
	cont	ours are associated with ground	lwater	·
	(1)	recharge - recharge	(2)	recharge - discharge
	(3)	discharge - recharge	(4)	discharge - discharge
58.	Whi	ch of the following statements is	not tru	e ?
	(1)	Weathering involves the process	s of trai	asportation of the decomposed products only.
	(2)	Erosion involves transportati formation.	ion of	the weathered material from the place of
	(3)		s of bre	eaking and decomposition of rocks.
	(4)	None of these	,5 01 01	and decomposition of rocks.
59.		ch of the following is the best ex	_	•
	(1)	Devtaki of Sinhagad Fort, Pune	` '	Khajana well, Beed
	(3)	Nahare Ambari, Aurangabad	(4)	None of these
60.	Con	nplete the sentence meaningfully		
	The	basic pH is acid neutralising cap	oacity a	nd it is
	(1)	7 to 14 (2) 1 to 7		(3) 1 to 5 (4) 5 to 6

(1) multiplied by (2) divided by (3) plus (4)minus 62. Fill in the blank with the correct option. Water as it travels in the atmosphere through ground dissolves a large variety of substances or salts. These substances in solution exist in their \_\_\_\_\_ form. suspended colloidal (2)ionic none

Drainage density is defined as the total length of the streams in a given drainage basin

\_ the area of the drainage basin.

Fill in the blank :

61.

63.	Fill i	in the blank appr	opriat	ely.						
	The	yield of the bore		is $4\frac{1}{2}$ (inch	es) m	easur	ed by	90° Vee no	otch w	hich is equal to
	(1)	litres/hr 11430	s. (2)	15950		(3)	777	0	(4)	21400
64.	Wha (1) (3)	at are the predom Basalt Sandstones and			of Kal (2) (4)	Grai	nites	es in Mahar	ashtra	?
65.		n shaped or funne erground solutio cavern				ying s	size, tl		in lime	estone region by
66.		v much is the acc cifications ?	eptab	ele limit of r	iitrate	ın w	ater ii	n mg/l to b	e pota	able, as per B/S
	(1)	42	(2)	45		(3)	52		(4)	60
67.	In el	iplete the followi lectrical resistivity	y metl	nod, with th	e incr		n the	spacing bel	tween	the current and
	(1)	decreases	(2)	increases		(3)	no e	effect	(4)	none of these
68.	Whi cycle	ch one of the follo	wing	is the predor	ninan	t sour	ce of e	energy for di	riving	the hydrological
	(1)	sun	(2)	wind		(3)	radi	oactivity	(4)	none of these
69.		ch camera of 74 - IA, IB satellite ?		wath width	with	1.5 km	n ove	rlap is used	l for t	aking images in
	(1)	LISS - I	(2)	LISS - II		(3)	ban	d 6 and 7	(4)	TM 4
70.	Whi (1) (3)	ich is the semicor Deccan basalt The Gondwana		ated group i	n gro (2) (4)	Pre	- cam	provinces of brian sedim è rocks		nrashtra ?
71.	Hov	v should the pote	ential	electrodes b	e in e	electri	cal res	sistivity sur	veys,	if D.C. Power is
	(1)	Steel pots	(2)	Brass pots	;	(3)	Por	ous pots	(4)	Wooden pots

72.	Whi	ch of the follow:	ing stat	ements is n	ot tru	e ?			
	(1)	A borewell is t	usually	drilled in h	ard ro	ock.			
	(2)	A tubewell is ι	ısually	drilled in al	lluviu	m.			
	(3)	A dug well is	usually	drilled by l	hand	operat	ed auger or d	rilling ma	achine.
	(4)	A dug well is	a shallo	ow well exc	avated	d by h	and.		
73.	Fill	in the blanks ap	propria	tely.					
	ln g	eneral for uncor	nsolidat	ed porous	media	ı, hyd:	raulic conduct	tivity vari	ies with particle
		clayey materia gravels display				lue of	hydraulic cor	nductivity	, whereas sand
	(1)	high - high			(2)	high	- low		
	(3)	low - high			(4)	low	- low		
74.	Wha	at is the size of t	he grou	ınd covered	by ea	ach ce	ll pixel of a sa	tellite ima	nge termed as ?
	(1)	Temporal reso	lution		(2)	Sate	llite resolutior	ı	
	(3)	Spatial resolut	ion		<b>(4)</b>	Non	e of these		
75.								expansiv	e force of super
	neat	ed steam withir	i consti	nctea subsu	irtace	chanr	ieis ?		
	neat	Normal	(2)	Thermal	irtace	chanr (3)		(4)	Tabular
 76.	(1)	Normal	(2) photog	Thermal	aken i	(3) n 'rur	Contact	ction of f	Tabularlight how much
76.	(1)	Normal way the aerial	(2) photog	Thermal	aken i	(3) n 'rur	Contact	ction of f	
76. 77.	(1) The approx (1)	Normal way the aerial roximately is the	(2) photoge % ove	Thermal raphs are ta erlap betwee 40	aken i en the	(3) n 'rur e two (3)	Contact  as' in the direct adjacent photo	ction of fos?	light how much
	The approx (1)	Normal way the aerial roximately is the	(2) photoge % ove (2) ollowing	Thermal raphs are taerlap betwee 40	aken i en the	(3) n 'rur e two (3) (3)	Contact as' in the direct adjacent photo	ction of fos? (4)	light how much
	The approx (1)	Normal  way the aerial roximately is the 30  e whether the fo	(2) photoge % ove (2) ollowing	Thermal raphs are taerlap betwee 40	aken i en the	(3) n 'rur e two (3) (3)	Contact  as' in the direct adjacent photo 50  the groundwa	ction of fos? (4)	light how much
	(1) The approximation (1) State Rem	Normal  way the aerial roximately is the 30  e whether the formate sensing is a	(2) photoge % ove (2) ollowing	Thermal raphs are taerlap betwee 40	is contident	(3)  n 'rur two (3)  rrect : ifying True	Contact  as' in the direct adjacent photo 50  the groundwa	ction of fos? (4)	light how much
	(1) The approximate (1) State Rem (1) (3)	Normal  way the aerial roximately is the 30  e whether the formate sensing is a False	(2) photoge % over (2) ollowing direct	Thermal raphs are to erlap betwee 40 g statement method for	is contident  (2) (4)	(3)  n 'rur two (3)  rrect : ifying True Nor	Contact  as' in the direct adjacent photo 50  the groundware as of these	ction of fos? (4)	light how much
77.	(1) The approximate (1) State Rem (1) (3)	Normal  way the aerial roximately is the 30  e whether the formate sensing is a False  Can not be jud	(2) photoge % over (2) ollowing direct	Thermal raphs are to erlap betwee 40 g statement method for	is contident  (2) (4)	(3)  n 'rur two (3)  rrect : ifying True Nor	Contact  as' in the direct adjacent photo 50  the groundware as of these	ction of fos? (4)	light how much
77.	(1) The approximate (1) State Rem (1) (3) White (1) Whate	Normal  way the aerial roximately is the 30  e whether the formate sensing is a False Can not be just ch of the follow Godavari	photoge % over (2) collowing direct diged ing is t (2) coromine	Thermal raphs are ta erlap betwee 40 g statement method for he westerly Krishna	is consident (2) (4)	(3)  n 'rur two (3)  rrect: ifying     Nor ing riv (3)	Contact  as' in the direct adjacent photo 50  the groundware as of these ver of Maharas Narmada	ction of fos? (4) ater. shtra? (4) oped from	light how much
77. 78.	(1) The approximate (1) State Rem (1) (3) White (1) Whate	Normal  way the aerial roximately is the 30  e whether the formate sensing is a False Can not be just ch of the follow Godavari  at are the most p	photoge (2)  collowing direct diged  ing is to (2)  coromine feature	Thermal raphs are ta erlap betwee 40 g statement method for he westerly Krishna	is consident (2) (4)	(3)  n 'rur two (3)  rrect: ifying     Nor ing riv (3)	Contact  as' in the direct adjacent photo 50  the groundware as of these ver of Maharas Narmada which are map	ction of fos? (4) ater. shtra? (4) oped from	All of these

80.						orrect opti		lculat	ed by multi	nlying t	he coefficient of
		neabili					1 15 Ca	icuiai	ed by muni	prymig	ne coemeient or
	(1)	aquif	-				(2)	agui	fer thickness	i	
	(3)	aquif		-			(4)	porc			
81.	Fill i	n the l	olank	appr	——— opriat	ely.	-				v
	Strea			rigin ase f		from grou	ındwat	er dis	scharge is re	ferred to	as groundwater
	(1)	stora	ge				(2)	rech	arge		
	(3)	runo	ff				(4)	none	e of the above	e	
82.						rock is the			volume of v	vater tha	t after saturation,
	(1)	Speci			ivity t	o its own	(2)		ific retention	,	
	(3)	Speci	-				(2) $(4)$	_	ctive porosity		
	(5)	——	inc gi								
83.	Wha	t kind	of m	ethod	is the	e fracture :	seal cen	nentai	tion ?		
	(1)	unco	nvent	tional	(2)	conventi	onal	(3)	direct	(4)	indirect
84.	Whi	ch of t	he fol	lowir	ng stat	ements is	true ?		<del></del>		
	(1)				~	tly have p		poros	ity.		
	(2)	Basal	ts pre	edom	inantly	y have sec	ondary	poro.	sity.		
	(3)	Alluv	vium	predo	mina	ntly has se	econdar	y por	osity.		
	(4)	None	of th	ie abo	ve sta	itements is	s true.	- ^	-		
85.	Wha	it is a	surfa	ce of	erosic	n or non-	deposit	ion, t	hat separates	s younge	r strata from the
	olde	r rocks	?				•		•	, ,	
	(1)	Dyke	2		(2)	Fault		(3)	Fold	(4)	Unconformity
86.	(-)	-						` '			-
ου.			he act	ion o	f rive	erosion n	natch th		owing :	_	
00.						erosion n	natch th	ne foll	owing : mical erosior	1	
ου.	Base	d on t	aulic			erosion n		ne foll Chei	-		
ou.	Base (a)	ed on tl Hydr	aulic asion			erosion n	(i)	ne foll Chei Mec	mical erosior	r	
ou.	Base (a) (b)	ed on the Hydr Corra	aulic asion tion			erosion n	(i) (ii)	ne foll Chei Mec Mec	mical erosior hanical wear	r on	
<i>30.</i>	Base (a) (b) (c)	ed on the Hydr Corra Attri	aulic asion tion			erosion n	(i) (ii) (iii)	ne foll Chei Mec Mec	mical erosior hanical wear hanical erosi	r on	
ou.	Base (a) (b) (c)	ed on the Hydrocorra Corra Attric	raulic asion tion osion	actio	n	erosion n	(i) (ii) (iii)	ne foll Chei Mec Mec	mical erosior hanical wear hanical erosi	r on	
ou.	Base (a) (b) (c) (d)	ed on the Hydra Corra Attrice Corra (a)	raulic asion tion osion (b)	actio	n (d)	erosion n	(i) (ii) (iii)	ne foll Chei Mec Mec	mical erosior hanical wear hanical erosi	r on	
ou.	Base (a) (b) (c) (d) (1)	ed on the Hydra Corra Attrice (a)	raulic asion tion osion (b) (iv)	(c) (i)	(d) (iii)	erosion n	(i) (ii) (iii)	ne foll Chei Mec Mec	mical erosior hanical wear hanical erosi	r on	

87.	What is a hydrograph?									
	(1)	A graphic plot	of cha	nges in 1	ainfall a	nd tin	ne.			
	(2)	A graphic plot	of cha	nges in c	elevation	of gro	oundwater !	level again	st time.	
	(3)	A graphic plot	of cha	nges in 1	rainfall a	gainst	pumping.			
	(4)	None of these								
88.	Wha	at is false colour	compo	site (fcc)	mainly t	ısed f	or?			
	(1)	Forest mapping	g and l	land use	landcov	er maj	pping			
	(2)	Satellite mappi	ing							
	(3)	Rainfall mappi	ing							
	(4)	None of these								
89.		at develops when			•			r just beyo	and the mouth of	
	(1)	delta			(2)	mea	nder			
	(3)	oxbow-lake			(4)	buri	ed channel			
90.	In E	Drinking Water Ç	uality	Standard	ds, what	is the	BIS permis	 sible limit	for fluoride ?	
	(1)	1.8	(2)	1.2	,	(3)	1.5	(4)	1.6	
91.	Wha (1)	at are the folds c Closed fold	alled a	s when a Drag fo	-	ent be	d slides pas Fan fold	st an incom	-	
92.		e whether true o								
		tershed develop: Instream of wate	_	4.5	_		educe soil e	erosion and	d siltation in the	
	(1)	false			(2)	true				
	(3)	neither true no	or false		(4)	non	e of these			
93.	Hov	v are the formati	ons on	opposite	e sides of	f the u	nconformit	y in a disc	onformity ?	
	(1)	parallel			(2)	incli	ined		-	
	(3)	vertical			(4)	non	e of the abo	ve		
94.		at is the legal to	ol avai	ilable in	the state	for th	ne protectio	n of publi	c drinking water	
	(1)	Maharashtra C	Ground	water (R	egulation	n for	Drinking w	ater purpo	oses) Act.	
	(2)	Groundwater			0		0	r r -	,	
	. ,							_		
	(3)	The Maharashi	ira Gro	undwate	r (Regula	ation i	for Drinking	g water pu	rposes) Act, 1993.	

					10					C -
95.	In GIS, aspatial data refers to which information?									
	(1)	geographic ir	iformati	on	(2)	sate	llite informat	ion		
	(3)	textual inform	nation		(4)	none	e of these			
96.	Fill:	in the blank cor	rectly.							
		esistivity survey straight line so							er's configura	ation,
	(1)	same	(2)	two		(3)	three	(4)	four	
97.	Complete the sentence with the correct option :									
	The Saucer Series is characterised by calc-granulites, marbles, garnetiferous schists and									and
		iganese silicates								
	(1)	Kodurites	(2)	Khondali	ites	(3)	Gondites	(4)	Calcites	
98.	What is the proper criterion for categorisation of semi - critical category?									
	(1) > 90 to ≤100% no decline in water level									
	(2) > 70 to ≤ 90% pre or post monsoon decline in water level									
	(3)	≤ 70% no dec	_							
	(4)	> 100% declir	ne in wa	iter						
99.	Why is the term Deccan Trap used for the Basaltic Lavaflows ?									
	(1) They occur in the deccan region.									
	(2) They have step like or terraced appearance of their outcrops.									
	(3)	They have for						•		
					-					
	(4)	None of these	2.							
100.		None of these v is the electric		ivity of a c	ylindri	ical so	lid of length	(L) and	cross section	 ι (A),
100.	Hov		al resist					(L) and	cross section	 ι (A),

- o 0 o -

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## सूचना -- (पृष्ठ 1 वरून पुढे...)

- (8) प्रश्नपुस्तिकेमध्ये विहित केलेल्या विशिष्ट जागीच कच्चे काम (रफ वर्क) करावे. प्रश्नपुस्तिकेव्यितिस्कित उत्तरपित्रकेवर वा इतर कागदावर कच्चे काम केल्यास ते कॉपी करण्याच्या उद्देशाने केले आहे, असे मानले जाईल व त्यानुसार उमेदवारावर शासनाने जारी केलेल्या ''परीक्षांमध्ये होणाऱ्या गैरप्रकारांना प्रतिबंध करण्याबाबतचे अधिनियम-82'' यातील तरतुदीनुसार कारवाई करण्यात येईल व दोपी व्यक्ती कमाल एक वर्षाच्या कारावासाच्या आणि/किंवा रुपये एक हजार रकमेच्या दंडाच्या शिक्षेस पात्र होईल.
- (9) सदर प्रश्नपत्रिकेसाठी आयोगाने विहित केलेली वेळ संपल्यानंतर उमेदवाराला ही प्रश्नपुस्तिका स्वत:बरोबर परीक्षाकक्षाबाहेर घेऊन जाण्यास परवानगी आहे. मात्र परीक्षा कक्षाबाहेर जाण्यापूर्वी उमेदवाराने आपल्या उत्तरपत्रिकेचा भाग-1 समवेक्षकाकडे न विसरता परत करणे आवश्यक आहे.

## नमुना प्रश्न

Q.No. 201. The Catch varies inversely with the size of the:

(1) nozzle

(2) droplet

(3) obstruction

(4) sprayer

ह्या प्रश्नाचे योग्य उत्तर ''(3) obstruction" हे आहे. त्यामुळे या प्रश्नाचे उत्तर ''(3)'' होईल, आता खालीलप्रमाणे प्रश्न क्र. 201 समोरील उत्तर-क्रमांक ''③'' चा कंस खालीलप्रमाणे पूर्णपणे छायांकित करून दाखविणे आवश्यक आहे.

प्र. क्र. 201. (1) (2) (4)

अशा पद्धतीने प्रस्तुत प्रश्नपुस्तिकेतील प्रत्येक प्रश्नाचा तुमचा उत्तरक्रमांक हा तुम्हाला स्वतंत्ररीत्या पुरविलेल्या उत्तरपत्रिकेवरील त्या त्या प्रश्नक्रमांकासमोरील संबंधित वर्तुळ पूर्णपणे छायांकित करून दाखवावा. ह्याकरिता फक्त काळ्या शाईचे बॉलपेन वापरावे, पेन्सिल वा शाईचे पेन वापरू नये.

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