### 

# 149/2017

Question Booklet Alpha Code



Question Booklet Serial Number

**Total Number of Questions : 100** 

Time : 75 Minutes

Maximum Marks : 100

#### INSTRUCTIONS TO CANDIDATES

- 1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A**, **B**, **C** & **D**.
- 2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.
- 3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
- 4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.
- 5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.
- 6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.
- 7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
- 8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.
- 9. Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.
- 10. Each question is provided with four choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.

# 11. Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.

- 12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
- 13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

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1.	Sree Narayana Guru	consecrated Siva ide	ol at	Aruvippuram in _			
	A) 1885	B) 1886	C)	1887	D)	1888	
2.	Ayyankali started the	first school for lower	cas	tes at			
	A) Perinad	B) Venganur	C)	Kollam	D)	Varkala	
3.	Who among the follo	wing authored Ananc	lasu	tram?			
	A) Brahmananda Si	vayogi	B)	Vagbhatananda			
	C) Vaikunta Swamik	al	D)	Chattampi Swam	ikal		
4.	Al Islam published by	y Vakkam Abdul Kha	dir N	loulavi was a			
	A) Daily	B) Weekly	C)	Fortnightly	D)	Monthly	
5.	Who among the follo	wing was arrested in	183	7 during the reign	of S	Swati Thirunal ?	
	A) Vaikunta Swamik	al	B) Chattampi Swamikal				
	C) Swami Agamana	nda	D) None of these				
6.	Who won the gold m 2017 ?	edal in hundred metr	es r	ace in the IAAF W	/orle	d Championships	
	A) Usain Bolt		B)	Christian Colema	n		
	C) Justin Gatlin		D)	None of these			
7.	Goods and Services	Tax was introduced i	n In	dia on		-	
	A) 1 <sup>st</sup> April 2017	B) 1 <sup>st</sup> March 2017	C)	1 <sup>st</sup> July 2017	D)	1 <sup>st</sup> June 2017	
8.	Ramnath Kovind is e	lected as the		President of I	ndia	ι.	
	A) 13 <sup>th</sup>	B) 14 <sup>th</sup>	C)	15 <sup>th</sup>	D)	16 <sup>th</sup>	
9.	Who won the 2017 V	Vimbledon men's sing	gles	title ?			
	A) Marlin Cilic		B) Roger Federer				
	C) Rafel Nadal		D)	Novak Djokovic			
10.	Kerala government's	LIFE Mission is relat	ed t	0			
	A) Provide food grain	ns to the poor	B) Medicare to the BPL families				
	C) Free education to	the poor	D)	The construction	of h	ouses for the poor	

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11.	The revolt of 1857 st	arted at				
	A) Meerut	B) Delhi	C)	Lucknow	D)	Kanpur
12.	Who was the Princip Swadeshi movement	al of National College t ?	sta	rted in Calcutta du	iring	the time of
	A) Rabindranath Tag	gore	B)	Rajani Kant Sen		
	C) Aurobindo Ghosh	1	D)	Mukunda das		
13.	How many policeme	n died in the Chauri C	hau	ura incident ?		
	A) 12	B) 22	C)	28	D)	30
14.	The followers of Kha	n Abdul Ghaffar Khar	n we	ere known as		
	A) Brown Shirts	B) Black Shirts	C)	Red Shirts	D)	Grey Shirts
15.	The Anamudi peak is	s situated in the High	Rar	iges of		_ district.
	A) Thiruvananthapu	ram	B)	Idukki		
	C) Wayanad		D)	Kozhikode		
16.	The three east flowin	g rivers of Kerala are	the	tributaries of		river.
	A) Kaveri	B) Krishna	C)	Tungabhadra	D)	Vaigai
17.	The Yamuna river m	erges with the Ganga	rive	er at	_	
	A) Devaprayag	B) Haridwar	C)	Kanpur	D)	Allahabad
18.	Tiruchirappalli is situ	ated on the banks of t	he _	rive	er.	
	A) Kaveri	B) Amaravati	C)	Vaigai	D)	Mandovi
19.	The construction of H	lirakkud dam started	duri	ng the		Five Year Plan.
	A) Fourth	B) Third	C)	Second	D)	First
20.	Who was the first Ch	ief Executive Officer of	of NI	TI Ayog ?		
	A) Amithab Kanth		B)	Aravind Panagiriy	/a	
	C) Sindhusree Khull	ar	D)	Narendra Modi		

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21.	Sweep of ceiling fan	refers to						
	A) Radius of circle formed by its rotation							
	B) Double the length of blade							
	C) The distance from the center of motor to tip of blade							
	D) Double the distar	ice from center of mot	or to tip of blade					
22.	Unit for measuremer	nt of electric energy is						
	A) KW	B) KwH	C) Volt	D) Volt ampere				
23.	When temperature o	f carbon increases, its	resistance					
	A) Decreases	B) Increases	C) Remains sa	me D) None of these				
24.	To decrease the resi	stance of any conduc	tor, a resistance	will be connected in				
	A) Series		B) Series-para	llel				
	C) Parallel		D) None of the	Se				
25.	In India usually gene	erating voltage is						
	A) 440 V	B) 11000 V	C) 33000 V	D) 66000 V				
26.	In AC machines best	t efficiency is given by	1					
	A) Transformer		B) Induction mo	otor				
	C) Slip ring motor		D) Alternator					
27.	Interpoles are conne	cted in						
	A) Series with armat	ture	B) Series with	field				
	C) Parallel with arma	ature	D) None of the	Se				
28.	According to IE rules	the permissible varia	tion of frequency	ris				
	A) 5%	B) 3%	C) 8%	D) 10%				
29.	In conduit wiring +ve	and – ve wires are ru	in in the same co	nduit to avoid				
	A) Capacitive effect		B) Inductive eff	ect				
	C) Both effects		D) None of the	se				

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30.	The total capacitanc $C_2 = 15 \ \mu F$ and $C_3 =$	e of three condensers 20 μF	con	nected in series a	as $C_1 = 30 \ \mu F$ ,			
	A) 6.66 μF	B) 65 μF	C)	9/60 μF	D) 80 μF			
31.	Induction motor runs	at						
	A) Synchronous spe	eed	B)	Below Synchrono	ous speed			
	C) Above Synchron	ous speed	D)	None of these				
32.	Short pitch winding i	s used because it						
	A) Magnifies the vol	tage						
	B) Saves copper of	res copper of the end rings						
	C) Improves the way	ve form of the induced	EM	F				
	D) Magnifies current	t						
33.	Generally at unity PF	the voltage regulatio	n of	an alternator is				
	A) Positive	B) Negative	C)	Zero	D) None of these			
34.	In three phase delta	connection, line volta	ge is	3				
	A) $\sqrt{3} V_{ph}$		B)	$V_{ph}/\sqrt{3}$				
	C) Same as phase voltage		D) Same as line current					
35.	Alternating current c	an induce voltage bec	aus	e it has				
	A) High peak value		B) Varying magnetic field					
	C) Constant magnetic field			D) None of these				
36.	In two watt meter me	thod of power measu	reme	ent if the PF is unit	ty then			
	A) $W_1 < W_2$	B) $W_1 > W_2$	C)	$W_{1} = W_{2}$	D) $W_2 = 0$			
37.	Induction type watt n	neter can be used in						
	A) AC only		B) DC only					
	C) Both AC and DC							

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38.	Highest doped regio	n in a transistor is			
	A) Emitter		B)	Collector	
	C) Base		D)	All are equally do	oped
39.	No load test on a tra	nsformer is conducted	l to i	measure	
	A) Copper loss		B)	Core loss	
	C) Total loss		D)	Efficiency	
40.	0. Which starter will give better starting torque to squirrel cage induction motor				
	A) DOL starter		B)	Star-delta starter	
	C) Auto transformer	starter	D)	None of these	
41.	Nichrome is widely u	used for			
	A) Heater coils		B)	Transformer wind	ding
	C) Filaments		D)	All of these	
42.	Unit of flux density is	3			
	A) Henry/m <sup>2</sup>	B) Webers/m <sup>2</sup>	C)	Newton/m <sup>2</sup>	D) Ohms/m <sup>2</sup>
43.	A material that is slig	ghtly repelled by a ma	gne	t is called	
	A) Paramagnetic ma	aterial	B)	Diamagnetic mat	terial
	C) Ferromagnetic m	aterial	D)	None of these	
44.	A substance that has	s high retentivity can b	e us	sed for the manufa	acture of
	A) Electromagnets		B)	Permanent magr	nets
	C) Temporary magn	iets	D)	None of these	
45.	A moving iron ammet	er reads 10 Amps. Hov	v mı	uch is the peak curr	rent of the oscillation ?
	A) 7.07 A	B) 1.414 A		70.7 A	D) 14.14 A

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46.	If the frequency char reactance of coil co	nges from 50 Hz to 100 nnected to supply	0 H	Z	keeping voltage c	onstant, the inductive
	A) Remains same		В	3)	Become half	
	C) Become doubled	b	D	))	Become 4 times	
47.	The true power cons	sumed by the pure ind	duct	to	r is	
	A) 0 watt	B) 1 watt	С	;)	2 watt	D) 4 watt
48.	Capacitance is not a	affected by				
	A) Plate area		В	3)	Distance betwee	n plates
	C) Dielectric materi	al	D	))	Frequency	
49.	19. In a capacitive AC circuit					
	A) Current leads the	e voltage	В	8)	Voltage leads the	e current
	C) Current is inphas	se with voltage	D	))	Current lags the	voltage
50.	Synchronous motor	when used for power	fac	ctc	or improvement sh	nould be
	A) Under excited		B	3)	Over excited	
	C) Loaded		D	)	Running on no-lo	bad
51.	To increase the amp	pere rating the cells ar	re to	0	be connected in	
	A) Series	B) Parallel	С	;)	Series-parallel	D) Parallel-series
52.	The capacity of a ce	ell is measured in				
	A) Volt-hour	B) Volts	С	;)	Ampere	D) Ampere-hours
53.	The metal used for	he control spring in el	lect	rio	cal instrument is	
	A) Steel		В	3)	Nichrome	
	C) Hard drawn cop	ber	D	)	Phosphor bronze	)

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- 54. Dynamo meter type meters are used to measure
  - A) Only AC quantities B) Only DC quantities
  - C) Both AC and DC D) Pulsating AC only
- 55. Megger is used to measure
  - A) Earth resistance B) Insulation resistance
  - C) Breakdown voltage of insulation D) Low resistance
- 56. Which one of the instrument has the same calibration for AC and DC?
  - A) Moving ironB) Moving coilC) Hot wireD) Dynamo meter type
- 57. What type of motor is used in a food mixer ?
  - A) DC shunt motor B) Universal motor
  - C) Capacitor start motor D) Shaded pole motor
- 58. The unit of luminous flux is
  - A) Candela B) Steradian C) Lux D) Lumen
- 59. Which of the following is the most efficient as a light source ?
  - A) Tungsten filament B) Black body
  - C) Carbon filament D) None of these
- 60. The gas inside the inner discharge tube of a sodium vapour lamp is
  - A) Argon B) Neon C) Helium D) Hydrogen
- 61. How many light points are allowed in one circuit ?
  - A) 10 points B) 15 points C) 20 points D) Any number

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62.	The holes on the alu	minium disc of an ene	erg	y I	meter helps to		
	A) Prevent creeping	J	В	)	Reducing resista	nce	
	C) Reduce the weig	ht of disc	D	)	Increase the torq	ue	
63.	Fuse rating is expres	ssed in terms of					
	A) Voltage	B) Current	С	)	kVA	D)	VAR
64.	Fusing factor of HR	C fuses will be					
	A) 1.1	B) 1.4	С	)	1.6	D)	1.7
65.	In this wiring two lan	nps should be switche	ed C	10	N at a time		
	A) Godown wiring	B) Tunnel wiring	С	)	Corridor wiring	D)	Hostel wiring
66.	Induced EMF in the	armature of a DC ger	nera	ato	or is basically		
	A) An alternating cu	rrent	В	)	A direct current		
	C) An oscillating cu	rrent	D) None of these				
67.	Flemings Right hand	d rule is used to identi	ify t	he	e		
	A) Direction of flux		В	3) Direction of rotation in			n a generator
	C) Direction of curre	ent in a motor	D	)	Direction of induc	ced	EMF
68.	Insulating material u	sed in between comm	nuta	ato	or segment is		
	A) Varnish	B) Empire cloth	С	)	Mica	D)	Film paper
69.	Lap winding is made	e in a machine for					
	A) High current high	n voltage	В	)	Low voltage low	curr	ent
	C) High voltage low	current	D	)	High current low	volt	age
70.	Back EMF of a DC n	notor					
	A) Opposes the sup	pply EMF	В	)	Aids the supply E	EMF	
	C) Does not affect the	ne armature current	D	)	Aids in increasing	g the	e supply current

#### 149/2017 71. Insulation resistance is measured in A) Mega watts B) Mega ohms C) Kilo amps D) Kilo volts 72. By setting the brush position exactly at magnetic neutral axis we get A) Maximum induced EMF B) Sparkless commutation C) Best performance D) All of the above 73. The magnetic field produced in the stator of a three phase induction motor travels at A) Rotating speed B) Asynchronous speed C) Synchronous speed D) Slip speed 74. The purpose of a back-up fuse is to provide protection against A) Over load B) Under load C) High voltage D) Short circuit 75. Jogging operation is also called as C) Braking D) Inching A) Starting B) Stopping 76. While running, the rotor frequency in a 3 phase induction motor is equal to A) Stator frequency B) (Stator frequency)/slip C) Stator frequency $\times$ slip D) None of these 77. The rotating magnetic field in a 3 phase 6 pole 50 Hz slip ring induction motor will rotate at A) 1000 rpm B) 1200 rpm D) 800 rpm C) 1500 rpm 78. Starting capacitor of single phase motor is A) Electrolytic capacitor B) Ceramic capacitor C) Oil filled paper capacitor D) None of these

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79.	The type of motor us	ed in ceiling fan is					
	A) Split phase		B)	Capacitor start			
	C) Capacitor start ca	apacitor run	D)	Permanent capacitor			
80.	Which one of the foll	lowing motor will have	low	est starting torque	e ?		
	A) Universal motor		B)	) Shaded pole motor			
	C) Capacitor start ca	apacitor run motor	D)	Repulsion induct	ion motor		
81.	When the speed of a	Iternator increases the	e fre	equency			
	A) Increases	B) Decreases	C)	Remains same	D) None of these		
82.	Salient pole type alte	ernators are used in					
	A) Thermal power s	tations	B)	Hydro power stat	tions		
	C) Nuclear power st	ations	D)	All of these			
83.	Which is the commo	n method of cooling a	pov	ver transformer ?			
	A) Air cooling	B) Oil cooling	C)	Air-blast cooling	D) Natural cooling		
84.	Iron losses of transfo	ormer are measured by	y				
	A) Low PF watt met	er	B)	Unity PF watt me	ter		
	C) Volt meter		D)	KWH meter			
85.	A transformer is work loss will be	king at its maximum eff	icie	ncy. Its core loss is	s 400 watts, its copper		
	A) 200 W	B) 400 W	C)	500 W	D) 800 W		
86.	Change in DC excita	tion of a synchronous	s mo	tor changes			
	A) Motor speed		B)	Applied voltage of	of the motor		
	C) PF of the motor		D)	All of these			

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87.	7. Conduction in a JFET is always by the							
	A) Majority carriers		B) Minority carriers					
	C) Holes		D) Electrons					
88.	Which of the following	ng transistors can be u	used in enhancement	mode ?				
	A) UJT	B) JFET	C) MOSFET	D) NPN transistor				
89.	<ol> <li>Type of insulator used for holding for HT overhead conductor on straight running of poles</li> </ol>							
	A) Post insulators		B) Pin type insulate	or				
	C) Stay insulator		D) Shackle insulate	or				
90.	The distance betwee	en two adjacent line p	oles is called					
	A) Sag	B) Span	C) Spacing	D) All of these				
91.	Positive electrode of	dry cell is made from	I					
	A) Copper	B) Carbon	C) Zinc	D) Sulphur				
92.	Permeability is the n	neasure of						
	A) The resistance o	f a metal						
	B) Flux of a magnet							
	C) Conductivity of a	substance for magne	etic lines of force					
	D) The sum of volta	ge drops around a ma	agnet					
93.	Moving coil instrume	ent usually have						
	A) Uniform scale the	roughout the range						
	B) Congested scale	in the beginning						
	C) Congested scale	in the end						
	D) None of these							

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94.	Temperature limit of	class E insulation is			
	A) 50°C	B) 80°C	C)	300°C	D) 120°C
95.	Most commonly use	d rectifier now a days	are		
	A) Rotary converter		B)	Mercury arc rectif	iers
	C) Solid state diode	2S	D)	None of these	
96.	In an ideal transform	ner			
	A) Windings have n	o resistance	B)	Core has no loss	es
	C) Core has infinite	permeability	D)	All of these	
97.	KWH meter can be	classified as			
	A) Deflecting instru	ment	B)	Digital instrumen	t
	C) Recording instru	ument	D)	Integrating instru	ment
98.	Fixed coil in a dynar	nometer type Watt me	eteri	is	
	A) Pressure coil		B)	Current coil	
	C) Power coil		D)	Dynamic coil	
99.	In MCB overload trip	oping is executed by			
	A) Magnetic coil		B)	Overload coil	
	C) Bimetal strip		D)	Solenoid	
100.	When silica gel in br	eather is saturated wi	th m	noisture its colour o	changes from
	A) Blue to pink		B)	Pink to blue	
	C) Blue to yellow		D)	Blue to red	

Space for Rough Work

Space for Rough Work