

22/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. The Right to Education Act in India was passed in the year :  
(A) 2005 (B) 2007  
(C) 2009 (D) 2013
2. Chattampi Swamikal attained Samadhi at :  
(A) Paymana (B) Chempazhanthi  
(C) Perunna (D) Varkala
3. 'Kakke Kakke Koodevide' – This famous Nursery Rhyme was written by :  
(A) Changampuzha (B) Kesava Dev  
(C) Kandathil Varghese Mappila (D) Ulloor S. Parameswaran Pillai
4. Temple entry proclamation was issued is No. 12 1936 by :  
(A) Marthanda Varma (B) Sri Chithira Thirunal  
(C) Swathi Thirunal (D) Dharmaraja
5. Article 352 of the Indian Constitution deals with provision regarding :  
(A) Declaration of Emergency  
(B) Proclamation of President's Rule  
(C) Amendment by Parliament  
(D) Free and compulsory education for children
6. 'Athmakathakoru Amukham' is the autobiography of :  
(A) Lalitha Prabha (B) A.V. Kuttamala Amma  
(C) Parvathi Nenmenimangalam (D) Lalithambika Antherjanam
7. Who consecrated 'mirror' for the first time in South India for worship?  
(A) Sreenarayana Guru (B) Ananda Theertha  
(C) Vaikunda Swami (D) Ayyaswami
8. Who was the Chairman of the deputy Committee of the constitution?  
(A) K.M. Munshi (B) Dr. B.R. Ambedker  
(C) Gopala Swami Ayengar (D) D.P. Khaitar

9. 'Sahodara Sangam' was founded by Ayyappan in :
- (A) 1903 (B) 1907  
(C) 1914 (D) 1917
10. The foundry Sadhu Jana Paripalana Yogum was :
- (A) Mahatma Gandhi (B) Swami Agamavada  
(C) Ayyankali (D) V.T. Bhattathiripad
11. If  $I_n$  is the identity matrix of order 'n' then  $I_n^{-1}$  is :
- (A) not exists (B)  $I_n$   
(C) 0 (D)  $nI_n$
12. If A and B are square matrices of the same order then which one is correct :
- (A)  $AB = BA$  (B)  $A - B = B - A$   
(C)  $A + B = B + A$  (D)  $A + B = A - B$
13.  $nC_0 - nC_1 + nC_2 - nC_3 + nC_4 - \dots + (-1)^n nC_n =$
- (A)  $2^n$  (B)  $2^n - 1$   
(C) 2 (D) 0
14. The lines  $3x - y + 4 = 0$  and  $2x + 6y - 3 = 0$  intersect each other at an angle :
- (A)  $90^\circ$  (B)  $45^\circ$   
(C)  $180^\circ$  (D)  $30^\circ$
15. A horizontal line passing through the point  $(-4, 3)$  has the slope :
- (A) 3 (B)  $\infty$   
(C) -4 (D) 0
16. The value of  $\frac{\cos 17^\circ - \sin 17^\circ}{\cos 17^\circ + \sin 17^\circ}$  is :
- (A) -1 (B) 0  
(C)  $\tan 28^\circ$  (D)  $\cos 34^\circ$

17.  $\lim_{x \rightarrow \infty} (\sqrt{x^2 + x + 1} - x) =$

(A) 0

(B)  $\frac{1}{2}$

(C)  $\infty$

(D) 1

18. If  $y = \sqrt{\cos x + \sqrt{\cos x + \sqrt{\cos x + \dots}}}$  then  $\frac{dy}{dx} :$

(A)  $\frac{\sin x}{1 - 2y}$

(B)  $\frac{2y}{\sin x}$

(C)  $\frac{2y}{\cos x}$

(D)  $\frac{\cos x}{1 - 2y}$

19. At  $x = -1$ , the function  $x^3 - 6x^2 - 36x + 7$  is :

(A) increasing

(B) decreasing

(C) has a maximum value

(D) has a minimum value

20.  $\int_0^{\pi} \frac{1}{1 + \sin x} dx =$

(A) 2

(B) 0

(C)  $\frac{1}{2}$

(D)  $\pi$

21. Second class bricks are :

(A) well burnt

(B) under burnt

(C) produce metallic sound when struck

(D) dark brown colour

22. Timber can be made for more fire resistant by :

(A) dipping and stepping process

(B) Sir Abel's process

(C) Charring

(D) Hot and cold open tank treatment

23. True meridians are :

(A) Parallel to each other

(B) Converge near equator

(C) Converge at a point called pole

(D) None of these

24. Theodolite is an instrument used for measuring :
- (A) horizontal angles (B) vertical angles  
(C) both (A) and (B) (D) none of these
25. Limit of proportionality depends upon :
- (A) type of material (B) type of loading  
(C) area of cross section (D) none of these
26. What is the main shaft of an engine that controls the movement of piston?
- (A) Cam Shaft (B) Axle  
(C) Drive Shaft (D) Crank Shaft
27. The connecting rod of an automobile is manufactured by \_\_\_\_\_ method.
- (A) Die casting (B) Cold heading  
(C) Forging (D) Casting
28. Which is not a part of Petrol Engine?
- (A) Fuel injector (B) Induction coil  
(C) Air filter (D) Piston rings
29. First law of thermodynamics refers to conservation of :
- (A) Energy (B) Force  
(C) Mass (D) Momentum
30. Which type of Engine is used in most of the heavy vehicles?
- (A) Two Stroke Petrol Engine (B) Two Stroke Diesel Engine  
(C) Four Stroke Petrol Engine (D) Four Stroke Diesel Engine
31. An electric heater draws 3.5 A from 110V source. The resistance of the heating element is approximately :
- (A)  $385\ \Omega$  (B)  $38.5\ \Omega$   
(C)  $3.1\ \Omega$  (D)  $31\ \Omega$
32. Which of the following series combinations dissipates the most power when connected across a 120V source?
- (A) One  $220\ \Omega$  resistor (B) Two  $220\ \Omega$  resistor  
(C) Three  $220\ \Omega$  resistor (D) Four  $220\ \Omega$  resistor

33. A certain voltage divider consists of two  $12\text{K}\Omega$  resistor in series. Which of the following load resistors will have the most effect on the output voltage?
- (A)  $1\text{M}\Omega$  (B)  $24\text{K}\Omega$   
(C)  $18\text{K}\Omega$  (D)  $12\text{K}\Omega$
34. A  $33\Omega$  half-watt resistor and a  $330\Omega$  half-watt resistor are connected across a 12V source. Which one(s) will over heat?
- (A)  $33\Omega$  (B)  $330\Omega$   
(C) both resistors (D) neither resistor
35. In a series RLC circuit that is operating above the resonant frequency, the current :
- (A) Lags the applied voltage (B) Leads the applied voltage  
(C) Is in phase with the applied voltage (D) Is zero
36. The colour of light emitted by an LED depends on :
- (A) It's forward bias  
(B) It's reverse bias  
(C) The amount of forward current  
(D) The type of semiconductor material used
37. Which rectifier requires 4 diodes?
- (A) Half wave rectifier (B) Full wave bridge rectifier  
(C) Full wave voltage doubler (D) Half wave voltage doubler
38. Read and write capabilities are available in :
- (A) RAM (B) ROM  
(C) Both RAM and ROM (D) Neither RAM and ROM
39. GSM stands for :
- (A) Global System for Mobile (B) Global System Module  
(C) Global Standard for Mobile (D) General Standard for Mobile
40. The quality of power supply is judged by :
- (A) It's size (B) Voltage  
(C) Regulation (D) All of the above

41. Who invented the 'Print Brush'?
- (A) Alexander Fleming (B) Alex Burton  
(C) Antony Williams (D) Alois Senefelder
42. Which of the following is not used as a loading material before making the paper?
- (A) China clay (B) Calcium carbonate  
(C) Titanium dioxide (D) Rosin
43. Who invented Offset press?
- (A) Alois Senefelder (B) Ira W. Rubel  
(C) Karl Klic (D) Guttenberg
44. Which plate is used in Intaglio printing?
- (A) Aluminium (B) Synthetic Rubber  
(C) Zinc (D) Copper
45. In which year the silk screen printing process was invented :
- (A) 1890 (B) 1870  
(C) 1875 (D) 1878
46. Which one is an indirect relief process?
- (A) Letterpress (B) Letterset  
(C) Lithography (D) Flexography
47. Which is the most commonly used method of toner printing?
- (A) Xerography (B) Electro lithography  
(C) Electro photography (D) Thermography
48. Who was responsible for the introduction of movable type printing?
- (A) Gary Stark Weather (B) Johannes Gutenberg  
(C) Charles Bell (D) James Bell
49. The period in between the print layout and final printing is known as :
- (A) Typesetting (B) DTP  
(C) Plate making (D) Prepress

50. Screen printing traces its origin from :
- (A) Offset printing (B) Stenciling  
(C) Laser printing (D) Inkjet printing
51. In which year the desktop computer was adopted in the printing industry :
- (A) 1982 (B) 1983  
(C) 1984 (D) 1985
52. Who is responsible for the preparation of the layout?
- (A) Editor (B) Designer  
(C) Production Manager (D) Distribution Controller
53. Who invented Linotype?
- (A) Tolbert Lanston (B) Washington I. Ludlow  
(C) Ottmar Mergenthaler (D) I.W. Rubel
54. Which is the heart of offset printing?
- (A) DTP (B) Cutting  
(C) Folding (D) Plate making
55. A style of pictorial composition in which several distinct pictures are cut or torn and combined into a composite one is called :
- (A) Montage (B) Duotone  
(C) Collage (D) Cutout image
56. Which is considered as the fourth revolution in printing?
- (A) DTP (B) Linotype  
(C) Phototypesetting (D) Laser printer
57. What is the compositions of stripped negatives or positives?
- (A) Foil (B) Flats  
(C) Flong (D) Embossing
58. Which method is not used in screen printing?
- (A) Block-out solution method (B) Tusche glue method  
(C) Photographic stencil method (D) Die stamping method

59. Which is the first stage of digital pre-press?  
 (A) Formatting (B) Image inputting  
 (C) Image processing (D) Colour separation
60. What is the powerful tool for the creation of print-ready layouts for the packaging and label industries?  
 (A) Platin (B) Plato  
 (C) Plotter (D) Autocad
61. What is the pH value of coated paper?  
 (A) Between 5 and 6 (B) Between 5.5 and 6.5  
 (C) Between 7.5 and 8.5 (D) Between 7 and 8
62. Which sheet is used as packing material when dressing a platen press?  
 (A) Pressboard (B) Cardboard  
 (C) Storyboard (D) Key sheet
63. Which one of the following is used to produce "water mark" in the paper?  
 (A) Couch roll (B) Beater  
 (C) Dandy roll (D) Suction box
64. The word 'paper' has been derived from :  
 (A) Parchment (B) Palm leaves  
 (C) Patra (D) Papyrus
65. The marks printed at the back edge of a folded section are called :  
 (A) Casting off (B) Signatures  
 (C) Collating (D) Section
66. The method of increasing or decreasing the space between the words to complete the line is called :  
 (A) Typesetting (B) Page make up  
 (C) Marking up (D) Justification
67. A paragraph ends with one word in the last line is called :  
 (A) Legend (B) Caption  
 (C) Re-word (D) Widow word



68. Estimating the number of pages a manuscript would make when set in type is known as :
- (A) Copyediting (B) Casting - up  
(C) Casting off (D) Copy fitting
69. What is used to view dot structure?
- (A) Linen tester (B) Light integrator  
(C) Elliptical (D) Scanner
70. Length of a line is called :
- (A) Leading (B) Measure  
(C) Layout (D) Ligature
71. Who invented paper?
- (A) Tsai Lun (B) Pi-Sheng  
(C) Bi - Sheng (D) Fourdrinier
72. Who introduced paper in India?
- (A) Chinese (B) Arabs  
(C) Mughals (D) Germans
73. Reading the proofs by a lone person without the help of a copyholder is termed as :
- (A) Collating (B) Imposing  
(C) Stripping (D) Horsing
74. Engraver's proofs are required only in \_\_\_\_\_ printing.
- (A) Letterpress (B) Offset  
(C) Gravure (D) Flexography
75. Proof readers office is known as :
- (A) Administrative Department (B) Front office  
(C) Reader's room (D) Layout Department
76. \_\_\_\_\_ proof are those which have few corrections errors and faults.
- (A) Engraver's proof (B) Galley proof  
(C) Dirty proof (D) Clean proof