RRB ALP Mechanic Radio & TV 23 Jan 2019 Official Paper (Shift 3) (Previous Year Paper)

RRB Assistant Loco Pilot (ALP) • 2019 • 175 questions • 150 minutes • Answer key

Take this paper as a timed mock test

Practise under exam conditions, then review your answers after you submit.

yourmocktest.com/pyq/rrb-alp/rrb-alp-mechanic-radio-tv-23-jan-2019-official-paper-shift-3-previ…

Scan the QR code or click the link to open it.

YourMockTest.com — Free Study Material

PART A

Q1. Name the scientist who discovered bacteria ?

(a) Robert Koch
(b) James Chadwick
(c) Eugen Goldstein
(d) A V Leeuwenhoek

Q2. If a body has a specific gravity of less than 1, then it will float in/on _____.

(a) air
(b) water
(c) liquids
(d) mercury

Q3. Which of the following options does not have an SI base unit?

(a) Amount of substance
(b) Frequency
(c) Luminous intensity
(d) Electric current

Q4. How many medals did India win in Rio Olympics, 2016?

(a) 3
(b) 4
(c) 2
(d) 5

Q5. It is mainly due to the gravitational effect of the _____ on the rotating earth that the level of water in the sea rises and falls.

(a) Venus
(b) Mercury
(c) Moon
(d) Sun

Q6. Two resistance of 2Ω and 6Ω are connected in series and this combination is connected across a 12 V battery. Find the current in the 6Ω resistor.

(a) 3.5 A
(b) 1. 5 A
(c) 0.5 A
(d) 2.5 A

Q7. Substances that are broken down by biological processes are said to be _____.

(a) reusable
(b) non-biodegradabl
(c) non-reusable
(d) biodegradable

Q8. A software program that has been developed to harm other computers is called a/an _____.

(a) server
(b) LAN
(c) malware
(d) operating system

Q9. Kuchipudi has its roots in which Indian State?

(a) Arunachal Pradesh
(b) Kerala
(c) Andhra Pradesh
(d) Himachal Pradesh

Q10. Which Indian cricketer received the Padma Bhushan in 2018?

(a) MS Dhoni
(b) Virat Kohli
(c) Sachin Tendulkar
(d) Saurav Ganguly

Q11. JPEG stands for _____.

(a) Joint Program Experts Group
(b) Joint Program Executing Group
(c) Joint Photographic Experts Group
(d) Joint Program Experimental Group.

Q12. Two resistors, one of 12 Ω and the other of 24 Ω are connected in parallel. This combination is connected in series with a 22 Ω resistor and a 12 V battery. The current in the 12 Ω resistor is _____.

(a) (8/15) A
(b) (2/15) A
(c) (6/15) A
(d) (4/15) A

Q13. RK Narayan is famous for his book _____.

(a) The Room on the Roof
(b) Two Livers
(c) Malgudi Days
(d) A suitable Boy

Q14. _____ protection must be worn whenever noise levels exceed the noise exposure standard.

(a) Hearing
(b) Head
(c) Eye
(d) Foot

Q15. A wire of length 1 and radius r has a resistance R. The resistance of another wire made of the same material but having half its length and half its radius will be.

(a) 4R
(b) R/2
(c) 2R
(d) R

YourMockTest.com — Free Study Material

Q16. Safety boots or shoes must be worn in designated areas to protect your _____ from falling objects.

(a) eye
(b) ear
(c) head
(d) feet

Q17. A cylindrical wire of length L and radius r has a resistance of R. The resistance of another wire of the same material but thrice its length and one-third its radius will be _____.

(a) 27R
(b) 9R
(c) R
(d) 3R

Q18. If a body is NOT homogeneous, then its density is a function of its _____.

(a) pressure
(b) acceleration
(c) position
(d) velocity

Q19. Two resistors of 10Ω and 20 Ω area connected in series and this combination is connected across a 30 V supply voltage. Find the voltage across the 10 Ω resistor.

(a) 20 V
(b) 10 V
(c) 5 V
(d) 15 V

Q20. Which one of these is a harvest festival?

(a) Teej
(b) Janmashtami
(c) Deepawali
(d) Onam

Q21. 86°F is equal to _____

(a) 20°C
(b) 30°C
(c) 34°C
(d) 10°C

Q22. Where is the Headquarters of UNESCO located?

(a) New York City
(b) Geneva
(c) Paris
(d) Washington DC

Q23. Name of the painter of famous painting, ‘Mahishasura’.

(a) MF Hussain
(b) Amrita Sher-Gil
(c) Raja Ravi Verma
(d) Tyeb Mehta

Q24. What is the work that needs to be done to increase the speed of a 1 kg ball from 2 m/s to 4 m/s?

(a) 8 J
(b) 10 J
(c) 6 J
(d) 12 J

YourMockTest.com — Free Study Material

Q25. The Ajanta Caves in Maharashtra feature paintings and sculptures that depict _____ tales.

(a) Arabic
(b) Islamic
(c) Buddhist
(d) Maratha

Q26. The volume of a given amount of water _____ between 0°C to 4°C.

(a) is zero
(b) decreases
(c) remains constant
(d) increases

Q27. Two resistance of 2Ω and 6Ω are connected in series and this combination is connected across a 12 V bettery. Find the power supplied by the battery.

(a) 10 W
(b) 18 W
(c) 16 W
(d) 14 W

Q28. An object weighs X units on the earth. If we take the same object to the moon, its weight there will be _____.

(a) zero
(b) less than X
(c) equal to X
(d) more than X

Q29. A body starts from rest. Its displacement is proportional to _____ when its acceleration is constant.

(a) time squared
(b) velocity
(c) work
(d) time

Q30. A source of voltage V maintains a current i in a circuit. The energy supplied to the circuit by the source in time t is _____.

(a) Vit
(b) 1/Vit
(c) Vi/t
(d) V/it

Q31. Who was the first governor of the Reserve Bank of India?

(a) Sir James Braid Taylor
(b) KR Puri
(c) HVR Iyengar
(d) Sir Osborne A Smith

Q32. A car covers 400 m in 20 seconds. Find the average speed (in km/hr) of the car.

(a) 72
(b) 124
(c) 108
(d) 36

Q33. If $\sin\theta = 15/17$, then $\cot\theta = ?$

(a) 8/15
(b) 8/17
(c) 15/8
(d) 17/15

YourMockTest.com — Free Study Material

Q34. In an examination, the highest score and the lowest score are different by 55 and the higher one was 9/4 times the lower one. Find the lowest score.

(a) 40
(b) 36
(c) 44
(d) 48

Q35. A number is as much greater than 50 as it is lesser than 84. What is the number?

(a) 65
(b) 66
(c) 68
(d) 67

Q36. If $x = \sqrt{125} \times \sqrt{30} \times \sqrt{6}$, then x is equal to:

(a) 175
(b) 125
(c) 136
(d) 150

Q37. A got Rs. 80 as his share of profit where the total profit was Rs. 240 and the ratio of profit distribution between A and B was x : 2. What is the value of x?

(a) 1
(b) 4
(c) 2
(d) 5

Q38. What is the median of 8, 5, 7, 9, 11, 6, 10?

(a) 9
(b) 8
(c) 10
(d) 7

Q39. If $5050 \times 0.5x = 25250$, then $2505 \div x^2 = ?$

(a) 0.2505
(b) 25.05
(c) 2.505
(d) 250.5

Q40. An article of marked price Rs. 12000 was sold. Had a discount of 15% been offered, a profit of 2% would have been made. What was the cost price?

(a) Rs. 10,200
(b) Rs. 10,000
(c) Rs. 11,000
(d) Rs. 10,800

Q41. A sum of Rs. 2,000 was spent in buying a pair of trousers. The sum spent was 2/5^(th) of the total money Shashi had with her. How much was the total money she had?

(a) Rs. 4,000
(b) Rs. 4, 250
(c) Rs. 4, 750
(d) Rs. 5,000

YourMockTest.com — Free Study Material

Q42. A machine was bought for Rs. 1,500 and a repairing charge of Rs. 100 was paid afterwards. At what price should it be sold to gain a profit of 25%?

(a) Rs. 2,040
(b) Rs. 1,960
(c) Rs. 2,000
(d) Rs. 1, 920

Q43. In angular measurement, one radian is equivalent to _____ degree (approximately).

(a) 65.27
(b) 57.27
(c) 90
(d) 180

Q44. A and B can do a work in 15 days. B and C can do the work in 20 days and A and C can do the work in 10 days. In how many days will they together completed the work?

(a) 10.67 days
(b) 10.91 days
(c) 10.71 days
(d) 9.23 days

Q45. Pipes A and B can fill a tank in 12 minutes and 16 minutes respectively. Both A and B are opened for 4 minutes and then A is closed. How much extra time will B take to fill the tank completely?

(a) 20/3 minutes
(b) 7 minutes
(c) 21/4 minutes
(d) 6 minutes

Q46. A can do 2/5 of a work in 10 days. B can do ½ of the some work in 10 days. They worked together for 5 days and then A left. In how many days will B finish the remaining work?

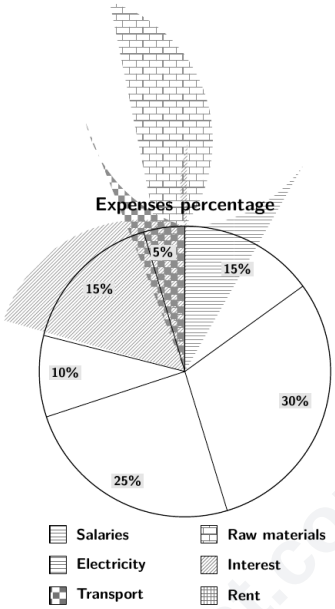
(a) 8
(b) 10
(c) 11
(d) 9

Q47. Reflection of point (-2, -6) on the Y-axis is:

(a) (2, 6)
(b) (-6, -2)
(c) (-2, 6)
(d) (2, -6)

Q48. The pie chart shows the breakup in percentage of the various expenses of a Company. Study the diagram and answer the following question.

YourMockTest.com — Free Study Material



What is the interest expense if total expenses is Rs. 25000.

(a) Rs. 2, 500
(b) Rs. 1, 800
(c) Rs. 9, 000
(d) Rs. 5, 000

Q49. A motorcycle travelled 1000 m at 36 km/hr. Find the time (in seconds) taken by the motorcycle to cover this distance.

(a) 300
(b) 100
(c) 400
(d) 200

Q50. A 4-digit number 1xy7 is divisible by 11. What is the value of x - y?

(a) -8
(b) -2
(c) -4
(d) -6

Q51. Tap M and N can together fill a cistern in 48/13 minutes. N alone can fill it in 6 minutes. How much time will M alone take to fill the cistern?

(a) 9.6 minutes
(b) 9 minutes
(c) 9.4 minutes
(d) 8.6 minutes

Q52. What is the curved surface area of a hemisphere whose radius is 7 cm? (take π = 22/7)

(a) 616 cm^2
(b) 154 cm^2
(c) 308 cm^2
(d) 924 cm^2

Q53. An airplane flies at the speed of 50 m/s. How much distance (in km) will it cover in a flight of 5 hours?

(a) 895
(b) 850
(c) 880
(d) 900

YourMockTest.com — Free Study Material

Q54. What is the distance between the points (4, 3) and (3, -2)?

(a) √26
(b) √24
(c) 6
(d) 5

Q55. sec 45° - tan 60° = ?

(a) • √3 + √2
(b) • √3 - √2
(c) (√3)/2
(d) √3 + √2

Q56. What is the least number which when doubled is perfectly divisible by 7, 12 and 15?

(a) 420
(b) 210
(c) 214
(d) 220

Q57. A sum of Rs. 10,000 amounts to Rs. 11, 449 in 2 years, when the interest is compounded annually. The interest rate percent per annum is:

(a) 6%
(b) 1%
(c) 7%
(d) 8%

Q58. The ages of X and Y are in the ratio 4 : 7. Three years earlier, the ratio of their ages was 1 : 2. What is the difference between their current ages (Y - X)?

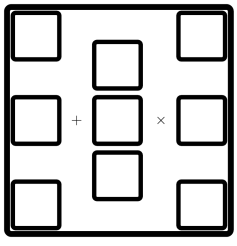
(a) 3
(b) 6
(c) 9
(d) 7.5

Q59. What is 80% of 50% of 90?

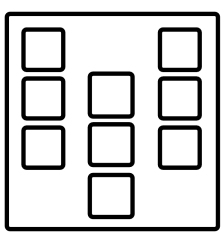
(a) 30
(b) 34
(c) 32
(d) 36

Q60. Choose the figure that is different from the rest.

(a)

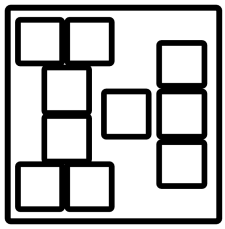


(b)

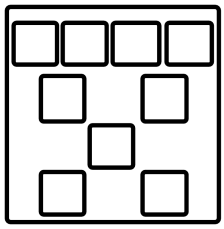


YourMockTest.com — Free Study Material

(c)



(d)



Q61. A series is given, with one number missing. Choose the correct alternative from the given ones that will complete the series.

1.14, 1.28, 1.42, ?, 1.70, 1.84

(a) 1.56
(b) 1.54
(c) 1.68
(d) 1.62

Q62. Two planes E and F start flying from the same point. E flies 7 km west, then turns to its left and flies 15 km. Meanwhile F flies 11 km east and turns right and flies 15 km. Where is F with respect to E?

(a) F is 18 km west of E
(b) F is 4 km east of E
(c) F is 18 km east of E
(d) F is 4 km west of E

Q63. Given below are some letters, that each of these letters has a corresponding number. Select the combination of numbers from the option so that the jumbled letters arranged accordingly will form a meaningful English word.

H T R U O A

1 2 3 4 5 6

(a) 6, 4, 2, 1, 5, 3
(b) 3, 4, 5, 2, 1, 6
(c) 1, 6, 2, 4, 5, 3
(d) 2, 1, 5, 3, 4, 6

Q64. I, J, K and L are sitting in a row. L and I are sitting next to each other and I and K are the ends. Who is sitting next to J?

(a) Only K
(b) L and I
(c) K and L
(d) Only L

Q65. Select the option that is related to the third term in the same way as the second term is related to the first term.

Tall : Short ? Glad : ?

(a) Sad
(b) Happy
(c) Emotion
(d) Smile

YourMockTest.com — Free Study Material

Q66. If, '+' represents '×', '-' represents '+', '×' represents '÷' and '÷' represents '-' then find the value of the following expression.

9 × 3 + 6 ÷ 2 = ?

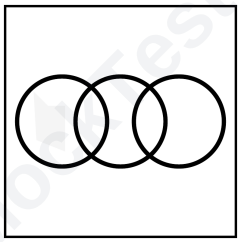
(a) 20
(b) 10
(c) 12
(d) 16

Q67. If G + H means G is daughter of H, G- H means G is sister H and G * H means G is husband of H, which of the following shows that I is the daughter of H?

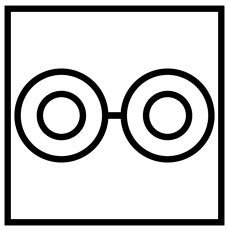
(a) I – J + F * H
(b) I + J - F * H
(c) I – J * F + H
(d) I * J - F + H

Q68. Which of the following Venn diagrams best represents the relationship between Indians, doctors and women?

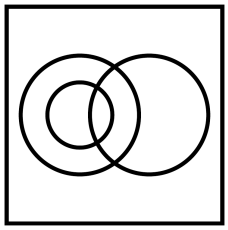
(a)



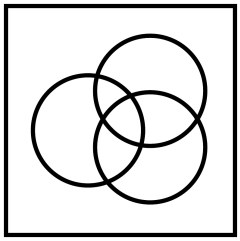
(b)



(c)



(d)



Q69. Given below are two statement, followed by two conclusion, I and II. You have to consider the statement to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow(s) from the given statements.

Statement 1: No quadrilaterals are polygons.

Statement 2: All polygons are rhombuses.

YourMockTest.com — Free Study Material

Conclusion I: Some rhombuses are quadrilaterals.

Conclusion II: Some rhombuses are polygons.

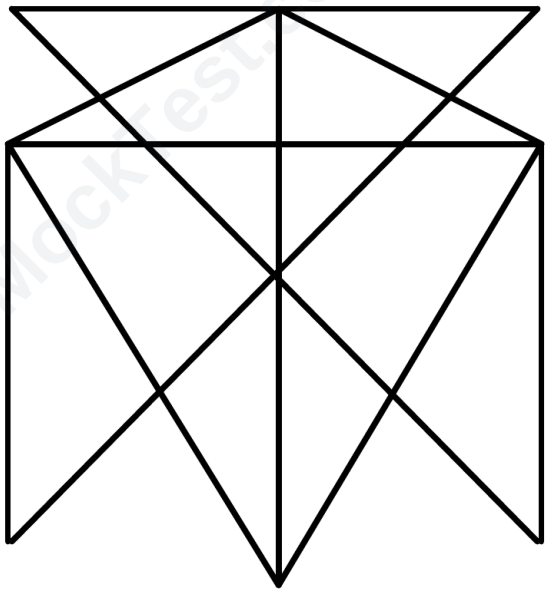
(a) Neither I nor II follows
(b) Only conclusion II follows
(c) Only conclusion I follows
(d) Both I and II follow

Q70. Which two signs should be interchanged to make the given equation correct?

9 ÷ 3 + 8 × 2 – 15 = 2

(a) × and -
(b) ÷ and -
(c) • and ×
(d) • and -

Q71. What is the minimum number of lines required to make the given image?



(a) 13
(b) 12
(c) 10
(d) 9

Q72. A series is give, with one term missing. Choose the correct alternative from the given ones that will complete the series.

OOOOOX, OOOOXX, OOOXXX, OOXXXX, ?

(a) XXXXXX
(b) OOXXXXX
(c) OOXXXX
(d) OXXXXX

Q73. If C $ D means C is daughter of D, C & D means C is mother of D and C % D means C is son of D, then what does W $ X & Y % Z mean?

(a) Z is wife of W
(b) Z is mother of W
(c) Z is father of W
(d) Z is daughter of W

YourMockTest.com — Free Study Material

Q74. Given below is a question, followed by two arguments, I and II. You have to decide which of the given arguments, if any, is a strong argument, with respect to the question.

Question: Should advertisements be banned on television?

Argument I: Yes, advertisements are immoral.

Argument II: No, advertisements bring in revenue which helps reduce cost for viewers.

(a) Only argument II is strong.
(b) Only argument I is strong.
(c) Neither I nor II is strong.
(d) Both I and II are strong.

Q75. Select the option that is related to the third number in the same way as the second number is related to the first number.

-9/11 : 11/9 ? 13/2 : ?

(a) 3/7
(b) 2/13
(c) -2/13
(d) -7/3

Q76. Given below is a statement followed by two assumption numbered I and II. You have to decide which of the assumptions is/are implicit in the statement.

Statement: The human body produces Vitamin D when exposed to sunlight.

Assumption I: The human body will have Vitamin D even if it is not consumed via food.

Assumption II: A large portion of the global population suffers from Vitamin D deficiency.

(a) Both I and II are implicit
(b) Only assumption II is implicit
(c) Neither I nor II is implicit
(d) Only assumption I is implicit

Q77. A salesperson starts from his office and drives 2 km east, then turns north and drives 7 km, then turns to his right and drives 6 km, then turns south and drives 7 km. Where is he now with respect to his starting position?

(a) 8 km east
(b) 4 km west
(c) 4 km east
(d) 8 km west

Q78. Unscramble the letters in the words given below and find the odd word out.

(a) FLOW
(b) ILNO
(c) ERTIG
(d) WCO

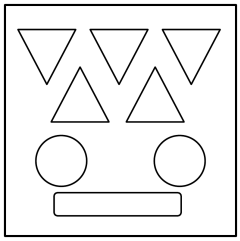
Q79. Find the odd group of letters from the given alternatives.

(a) EFG
(b) PQR
(c) VWX
(d) HJL

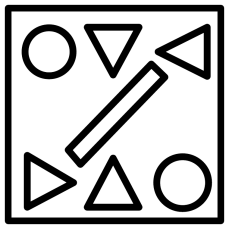
Q80. Choose the figure that is different from the rest.

YourMockTest.com — Free Study Material

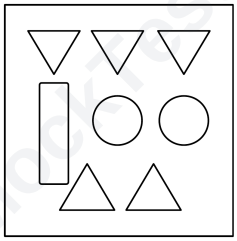
(a)



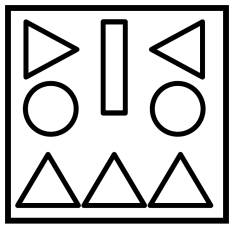
(b)



(c)



(d)

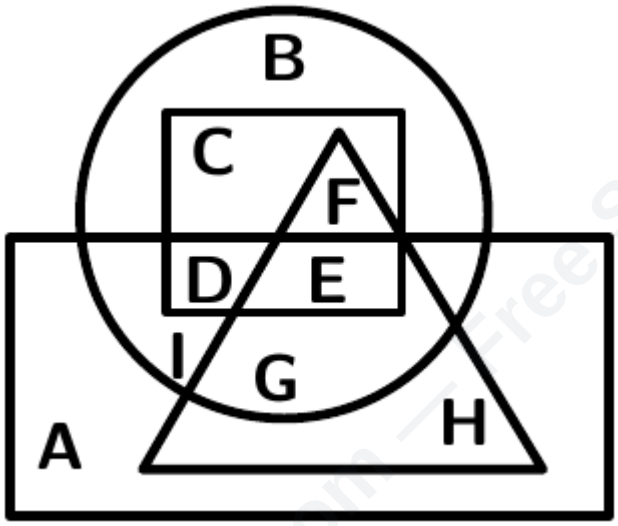


Q81. In a code language, 295 means ‘water is liquid’, 549 means ‘oil is liquid’ and 824 means ‘oil on water.’ Find the code for ‘on’.

(a) 4
(b) 2
(c) 8
(d) 5

Q82. In the following figure, square represents Chinese, triangle represents dancers, circle represents male and rectangle represents architects. Which set of letters represents dancers who are male?

YourMockTest.com — Free Study Material



(a) DEIG
(b) DEF
(c) IGH
(d) GEF

Q83. The abbreviation AC in an engineering drawing stands for _____.
(a) Across Corners
(b) Aerial Cut
(c) Attached Circle
(d) Air Conditioning

Q84. Greater the value of _____ of a material, the more rapidly it will conduct heat.
(a) melting point
(b) latent heat
(c) regelation
(d) thermal conductivity

Q85. The effort applied to move a load is 15 units and the mechanical advantage is observed to be 3. Find the load.
(a) 5 units
(b) 3 units
(c) 15 units
(d) 45 units

Q86. What is the unit's digit in 3^(66)× 6^(41) × 7^(53)
(a) 8
(b) 3
(c) 6
(d) 7

Q87. If the width of a standard engineering drawing sheet is 841 mm, then its length would be _____ mm.
(a) 1189
(b) 1250
(c) 1000
(d) 1216

Q88. A 200 g block of iron was heated from 30°C to 60°C. How much heat was transferred to the block (specific heat of iron is 450 Jkg^(-1)K^(-1))?
(a) 6000 J
(b) 27 J

(c) 2700 J
(d) 270 J

Q89. If a machine overcomes a load 'L' and the distance travelled by the load is 'Ld', the work done by the load will be _____.
(a) L × Ld
(b) L/Ld
(c) Ld/L
(d) 1/(L × Ld)

Q90. A brass rod (thermal conductivity 109 J/s m K) has an area of cross section 0.04 m² and length 20 cm. If the two end of the rod are maintained at a temperature difference of 200°C, the rate of heat flow through the rod is _____.
(a) 3.42 kJ/s
(b) 2.32 kJ/s
(c) 4.36 kJ/s
(d) 5.80 kJ/s

Q91. The effort in a class 1 lever is in _____ direction(s).
(a) three
(b) multiple
(c) two
(d) one

Q92. The velocity ratio of a simple machine is the ratio of distance traveled by the _____ to the distance traveled by the _____ in the machine.
(a) load; load
(b) effort; load
(c) load; effort
(d) effort; effort

Q93. If straight lines are drawn from various points on the contour of an object to meet a plane, the figure obtained on the plane is called the _____ of the object.
(a) development
(b) dimensioning
(c) projection
(d) animation

Q94. A _____ is a theoretical exact plane, axis or point location that GD & T or dimensional tolerances are referenced to.
(a) flange
(b) frame
(c) section
(d) datum

Q95. Molar specific heat capacity of a substance is _____.
(a) (1/μ)((Δ Q)/(Δ T))
(b) μ ((Δ Q)/(Δ T))
(c) (1/μ)((Δ T)/(Δ Q))
(d) μ ((Δ T)/(Δ Q))

Q96. In engineering drawing, the letters LH signifies _____.
(a) Level Hide
(b) Left Hand
(c) Low Heat
(d) Limit of Height

YourMockTest.com — Free Study Material

Q97. Identify the material having high coefficient of volume expansion.

(a) Brass
(b) Alcohol
(c) Glass
(d) Water

Q98. An object starts from rest at x = 0 m and moves with a constant acceleration of 1.6 m/s² along the x-axis. During its journey from x = 12.8 m to x = 20.0 m, its average velocity will be _____.

(a) 7.2 m/s
(b) 3.6 m/s
(c) 8.8 m/s
(d) 2.4 m/s

Q99. You are given a question and two statements. Identify which of the statements is/are necessary/sufficient to answer the question.

Question: What was the discount percent offered on the soap by the store?

Statements:

I) The store is giving 1 soap free on purchase of three.

II) Rs. 10 discount is offered on purchase of soap worth 36.

(a) II alone is sufficient while I alone is not sufficient
(b) I alone is sufficient while II alone is not sufficient
(c) Neither I nor II is sufficient
(d) Either I or II is sufficient

Q100. Identify the material having low coefficient of volume expansion

(a) Iron
(b) Mercury
(c) Brass
(d) Aluminium

PART B

Q101. A series resonant circuit consists of a resistor of 10 Ω, a capacitor of 1 μF and an inductor of 1 mH. What is the value of the current flowing through this circuit at resonance if the applied voltage is 100 V AC?

(a) 100 mA
(b) 1 A
(c) 10 mA
(d) 10 A

Q102. What is the name of the device that have three terminals and two layers?

(a) NPN transistor
(b) UJT
(c) PNP transistor
(d) FET

Q103. In a mixer, which control determines the amount of signal to be sent to the right or left channels?

(a) Equaliser
(b) Filter
(c) PAN
(d) Treble

YourMockTest.com — Free Study Material

Q104. In which part of a cell does oxidation take place?

(a) Anode
(b) Container
(c) Electrolyte
(d) Cathode

Q105. What are the speakers that handle the higher range of audio frequencies called?

(a) Tweeters
(b) Woofers
(c) Box speakers
(d) Bass speakers

Q106. _____ is the input of detector stage?

(a) IF signal
(b) RF signal
(c) Audio signal
(d) carrier wave

Q107. Which of the following is NOT a topology of an SMPS?

(a) Forward converter
(b) Reverse converter
(c) AC to DC converter
(d) DC to DC converter

Q108. The binary equivalent of the octal number 456 is _____.

(a) 100111101
(b) 100101110
(c) 101011110
(d) 101001101

Q109. The shape of the time base signal of a CRO is generally a _____.

(a) Sine Wave
(b) Square Wave
(c) Triangle Wave
(d) Sawtooth Wave

Q110. What is the function of a shunt resistor used for extending the range of an ammeter?

(a) To divide the additional voltage.
(b) To increase the meter resistance.
(c) To increase the PF.
(d) To bypass the additional current.

Q111. Identify the terminals in a three-point starter from the options given below.

(a) Line, field and armature terminals
(b) Line, NLR and armature terminals
(c) Line, field and NLR terminals
(d) NLR, field and armature terminals

Q112. A CRO displays a sine waveform which spans 3 cycles in 6 horizontal divisions. If the time base switch is set to 1 ms /div, what is the frequency of this signal which is being measured?

(a) 500 Hz
(b) 50 Hz
(c) 20 Hz
(d) 200 Hz

YourMockTest.com — Free Study Material

Q113. If the _____ section in a TV has failed, the result is "No Sound, No Picture".

(a) horizontal transistor
(b) vertical output
(c) sync separator
(d) IF output

Q114. In a motor speed control using TRIAC and UJT, the potentiometer controls:

(a) the thyristor gate current
(b) the gate voltage in the thyristor circuit
(c) the frequency of the pulses from UJT
(d) the thyristor anode voltage

Q115. In an AM with m=1, the power in one sideband is:

(a) one-fourth of the carrier power
(b) the same as the total power
(c) three-fourth of the total power
(d) one-tenth of the total power

Q116. Reception of a station in a wrong position is caused by _____

(a) Defective gang condenser
(b) Misalignment of I.F.T
(c) Misalignment of antenna coil
(d) Oscillator coil

Q117. The wavelength of the laser used in a DVD player is _____.

(a) 820 nm
(b) 540 nm
(c) 780 nm
(d) 650 nm

Q118. Which type of loss can be reduced in a transformer by increasing the diameter of the conductor?

(a) Hysteresis loss
(b) Magnetic loss
(c) Copper loss
(d) Eddy current loss

Q119. The regenerative process where the collector junction temperature increases the collector current and vice versa is called _____.

(a) temperature stability
(b) positive feedback
(c) oscillation
(d) thermal runaway

Q120. Which of the following statements is TRUE in case of filters used with rectifiers?

(a) Capacitors and inductors are both connected in series with the output.
(b) Capacitors and inductors are both connected in shunt with the output.
(c) Capacitors are connected in series and inductors in shunt with the output.
(d) Capacitors are connected in shunt and inductors in series with the output.

Q121. In television, one half of horizontal pixels rows are refreshed in one cycle and the other half in the next cycle. This process is known as _____.

(a) sequential scanning
(b) alternate scanning
(c) interlaced scanning
(d) differential scanning

YourMockTest.com — Free Study Material

Q122. Which one of the following is referred to as a free one-shot circuit?

(a) Schmitt trigger
(b) Monostable
(c) Astable multivibrator
(d) Bistable multivibrator

Q123. Why crystal receiver has poor selectivity?

(a) No loud speaker is used
(b) No battery is used
(c) it has long antenna
(d) No tuned circuit is used

Q124. _____ coupling is a way to provide impedance matching in the AF amplifiers.

(a) Resistive
(b) RC
(c) Direct
(d) Transformer

Q125. In Silicon Controlled Rectifier (SCR):

(a) holding current > latching current
(b) holding current < latching current
(c) holding current = latching current
(d) holding current = 0.6 V/ forward resistance

Q126. One of the criteria for oscillations to occur in an amplifier is that:

(a) the amplifier must have a variable power supply
(b) the loop gain must be slightly greater than unity
(c) the amplifier must be in the cut-off state
(d) the amplifier output impedance must be zero

Q127. The basic components of an optocoupler are _____.

(a) LED and phototransistor
(b) LED and LDR
(c) crystal and LDR
(d) photodiode and crystal

Q128. If the height of an antenna increases, the angle of radiation _____

(a) Increases
(b) Becomes a zero
(c) Does not change
(d) Decreases

Q129. In a transistor, identify the terminal with the highest doping from the options given below.

(a) Intrinsic zone
(b) Emitter
(c) Collector
(d) Base

Q130. If a receiver is able to detect and amplify even very weak signals, its _____ considered to be very good.

(a) fidelity
(b) selectivity
(c) bandwidth
(d) sensitivity

YourMockTest.com — Free Study Material

Q131. When two resistors of equal value are connected across a 220 V DC supply, the current through each resistor is 1 A. Find the colour code of the resistors.

(a) Brown, Black, Red
(b) Red, Red, Red
(c) Black, Brown, Red
(d) Red, Red, Brown

Q132. According to Kirchoff's current law,:

(a) the sum of the currents entering a node = the sum of the currents leaving the node
(b) the sum of the potential differences across all elements = 0
(c) the total current is directly proportional to the applied voltage
(d) the sum total of all the currents in a loop = 0

Q133. Which of the following is NOT a type of wireless communication technology?

(a) Satellite communication
(b) OFC communication
(c) Bluetooth communication
(d) Infrared communication

Q134. A discriminator is basically a _____.

(a) Wein bridge oscillator
(b) AM modulator
(c) FM detector
(d) RS flip flop

Q135. In wave propagation, fading refers to:

(a) the reduction in signal strength
(b) the changing of the colour
(c) the shifting of frequency
(d) the changing of the wavelength

Q136. The bandwidth of a TV channel in India is _____.

(a) 7 MHz
(b) 10.8 MHz
(c) 5.5 MHz
(d) 15 MHz

Q137. A bridge rectifier receives its input from a 4 : 1 step down transformer connected 220 V AC. Identify the PIV of the bridge rectifier from the given options.

(a) 55 V
(b) 141.4 V
(c) 77.7 V
(d) 63.6 V

Q138. TV remote controls commonly use _____ to communicate with the TV.

(a) a laser diode
(b) Bluetooth transmitter
(c) Infrared LED
(d) UV transmitter

Q139. AM broadcast transmits _____

(a) Carrier and lower side band
(b) Only side bands
(c) Only carrier
(d) Both side bands and carrier

YourMockTest.com — Free Study Material

Q140. Two amplifiers each of gain 10 and 25 are cascaded. If the input voltage to the first amplifier is 10 mV, the output of the second stage will be _____.

(a) 25 V
(b) 2.5 V
(c) 125 V
(d) 100 V

Q141. The geostationary orbit is _____ km away from the surface of the earth.

(a) 36,000
(b) 2,950
(c) 38,000
(d) 2,200

Q142. The conductive coating on the outer surface of a picture tube is called _____.

(a) metal primer
(b) liquid conductor
(c) Aquadag
(d) enamel

Q143. A DVD uses the _____ method to store and read data.

(a) optical
(b) electrical
(c) magnetic
(d) Hall effect

Q144. Why FM is popular compared to the AM _____.

(a) Easier to generate and detect
(b) Requires simple transmission and reception equipment's
(c) Less sensitivity to noise
(d) Occupies less band width

Q145. _____ is used to describe information about the hue and saturation of a colour.

(a) Chrominance
(b) Luminance
(c) Contrast
(d) Intensity

Q146. In a common-anode seven-segment display, what will be displayed if all the seven data inputs are at logic "0"?

(a) 8
(b) 2
(c) 4
(d) 0

Q147. What is the full form of DTS?

(a) Digital Transmission Systems Format for Video
(b) Digital Theatre Systems Format for Video
(c) Digital Theatre Systems Format for Audio
(d) Direct Transmission for Satellite Services

Q148. Which of the following input conditions of an SR flip flop will result in an SET condition at the output?

(a) R = 0, S = 0
(b) R = 1, S = 0
(c) R = 0, S = 1
(d) R = 1, S = 1

YourMockTest.com — Free Study Material

Q149. Which stage in an AM transmitter is also known as Harmonic Generator?

(a) Power amplifier
(b) Carrier oscillator
(c) Frequency multiplier
(d) AFC circuit

Q150. In satellite communication, the downlink frequency is always _____ the uplink frequency.

(a) equal to
(b) independent of
(c) higher than
(d) lower than

Q151. The value of the first IF in double conversion FM Radio receivers is _____.

(a) 108 MHz
(b) 10.7 MHz
(c) 470 kHz
(d) 455 kHz

Q152. When a transistor is biased such that its Base current is greater than zero and its collector-to-emitter voltage is less than 0.2 V, it is operating in the _____ region.

(a) cut-off
(b) active
(c) breakdown
(d) saturation

Q153. In a PA system, a _____ is used to adjust the amplitude of different frequencies to achieve the desired quality of sound output.

(a) amplifier
(b) filter
(c) attenuator
(d) equalizer

Q154. _____ electrons flow every second in ten amperes of current.

(a) 31.4 × 10^8
(b) 62.4 × 10^8
(c) 31.4 × 10^(18)
(d) 62.4 × 10^(18)

Q155. A 3.1 sound system has _____.

(a) 3 speakers and one tweeter
(b) only 3 speakers
(c) bass, treble, and speaker
(d) 3 speakers and one subwoofer

Q156. In an AM radio receiver, for an RF signal of 1545 kHz, the value of the local oscillator frequency will be _____.

(a) 2,000 kHz
(b) 455 kHz
(c) 1,455 kHz
(d) 2,455 kHz

Q157. The band width of an A.M radio receiver?

(a) 10 KHz
(b) 1 KHz
(c) 5 MHz
(d) 20 KHz

YourMockTest.com — Free Study Material

Q158. An ideal 220 VA step-down transformer is connected to a 220 V supply in the primary. If its turns ratio is 4 : 1, then the value of the secondary current will be _____.

(a) 11 A
(b) 4 A
(c) 22 A
(d) 1 A

Q159. What is a wave trap?

(a) Low pass filter
(b) High pass filter
(c) Wide band amplifier
(d) Resonance circuit

Q160. In a direct-coupled amplifier, the gain falls at high frequencies mainly due to _____.

(a) Stray capacitances
(b) Filtering issues
(c) Coupling capacitors
(d) Power supply

Q161. Which of the following quantities is the same for the primary and secondary of a transformer?

(a) Voltage
(b) Phase
(c) Frequency
(d) Current

Q162. Which component in a TV is responsible for generating the high voltage sawtooth signals at a relatively high frequency?

(a) Fly back transformer
(b) UPS transformer
(c) SMPS transformer
(d) Isolation transformer

Q163. When simplified, the Boolean expression A + AB results in _____.

(a) B
(b) A + 1
(c) AB
(d) A

Q164. In an Op-Amp voltage regulator, the regulating element is connected:

(a) in series with the load
(b) in series with the Zener diode
(c) across the Zener diode
(d) across the load

Q165. What will happen to the output voltage in a series regulator, when temperature increases?

(a) Equals input voltage
(b) Increases
(c) Decreases
(d) Remain constant

Q166. In a microprocessor, which is the register that always holds the result of an operation?

(a) Instruction register
(b) Accumulator
(c) Buffer
(d) Data bus

YourMockTest.com — Free Study Material

Q167. Identify the features of CC configuration from the options given below.

(a) Highest input impedance and highest current gain.
(b) Highest input impedance and highest voltage gain.
(c) Lowest input impedance and lowest voltage gain.
(d) Lowest input impedance and highest voltage gain.

Q168. Which one of the following does NOT affect the value of the capacitance of a parallel plate capacitor?

(a) Distance between the plates
(b) Voltage applied to the capacitor
(c) Surface area of the plates
(d) Permittivity of the dielectric used

Q169. In an FM radio receiver, which section uses the limiter circuit at its input?

(a) AGC
(b) Detector
(c) AF amplifier
(d) Mixer

Q170. Which of the following types of microphone requires an external power source to operate?

(a) Condenser microphone
(b) Paper microphone
(c) Dynamic microphone
(d) Ribbon microphone

Q171. When the communication allows simultaneous talking and listening by two parties over the same channel, it is called _____.

(a) full duplex
(b) simplex
(c) biplex
(d) half duplex

Q172. _____ is the digital 2-input logic gate whose output is HIGH only when both its inputs are the same.

(a) EX OR Gate
(b) EX NOR Gate
(c) AND gate
(d) NAND Gate

Q173. Which type of memory needs to be regularly refreshed?

(a) DRAM
(b) ROM
(c) SRAM
(d) CMOS

Q174. The IC CA810 can be used as power amplifier in many applications. Which is the circuit this IC cannot be used?

(a) Radio receiver and tape recorders
(b) Television receivers
(c) Small PA systems
(d) Power driving circuits

Q175. An advantage of modulation is the use of _____.

(a) smaller antenna
(b) smaller circuit
(c) lower bandwidth
(d) lesser power

YourMockTest.com — Free Study Material

ANSWER KEY

1	a	2	a	3	a	4	a	5	a	6	a	7	a	8	a	9	a	10	a
11	a	12	a	13	a	14	a	15	a	16	a	17	a	18	a	19	a	20	a
21	a	22	a	23	a	24	a	25	a	26	a	27	a	28	a	29	a	30	a
31	a	32	a	33	a	34	a	35	a	36	a	37	a	38	a	39	a	40	a
41	a	42	a	43	a	44	a	45	a	46	a	47	a	48	a	49	a	50	a
51	a	52	a	53	a	54	a	55	a	56	a	57	a	58	a	59	a	60	a
61	a	62	a	63	a	64	a	65	a	66	a	67	a	68	a	69	a	70	a
71	a	72	a	73	a	74	a	75	a	76	a	77	a	78	a	79	a	80	a
81	a	82	a	83	a	84	a	85	a	86	a	87	a	88	a	89	a	90	a
91	a	92	a	93	a	94	a	95	a	96	a	97	a	98	a	99	a	100	a
101	a	102	a	103	a	104	a	105	a	106	a	107	a	108	a	109	a	110	a
111	a	112	a	113	a	114	a	115	a	116	a	117	a	118	a	119	a	120	a
121	a	122	a	123	a	124	a	125	a	126	a	127	a	128	a	129	a	130	a
131	a	132	a	133	a	134	a	135	a	136	a	137	a	138	a	139	a	140	a
141	a	142	a	143	a	144	a	145	a	146	a	147	a	148	a	149	a	150	a
151	a	152	a	153	a	154	a	155	a	156	a	157	a	158	a	159	a	160	a
161	a	162	a	163	a	164	a	165	a	166	a	167	a	168	a	169	a	170	a
171	a	172	a	173	a	174	a	175	a										

YourMockTest.com – Free Study Material

More previous year papers and mock tests: **www.yourmocktest.com/pyq**