RRB ALP Fitter 23 Jan 2019 Official Paper (Shift 1) (Previous Year Paper)

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

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

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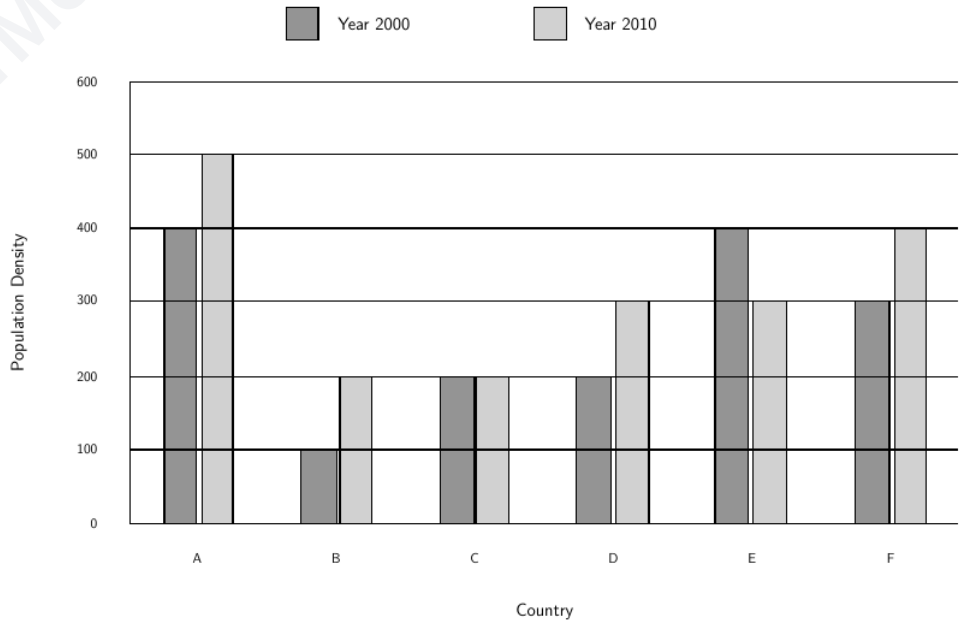
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PART A

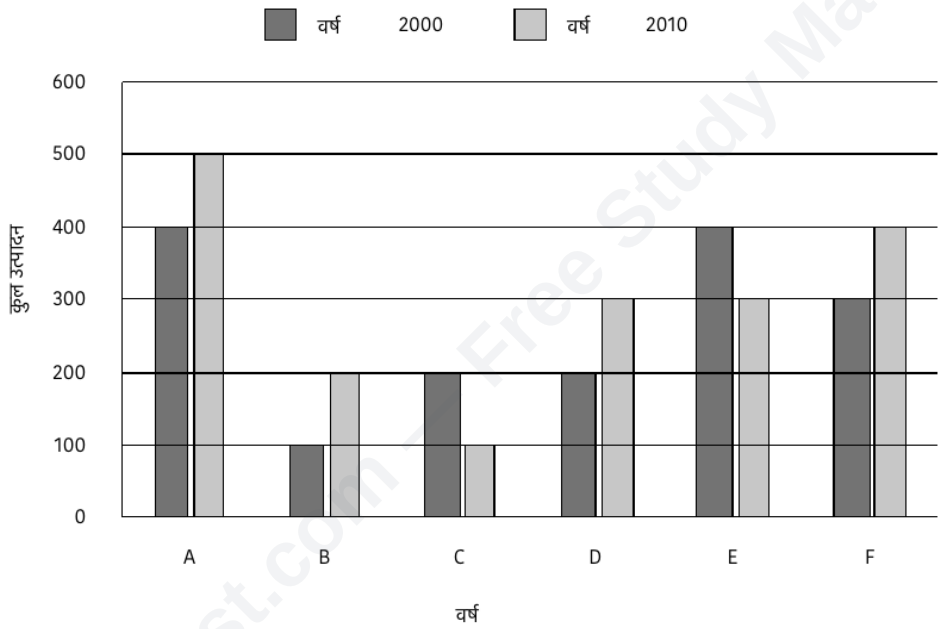
Q1. What is the diameter (in cm) of a sphere of surface area 1386 cm²?

(a) 14
(b) 21
(c) 10.5
(d) 24.5

Directions



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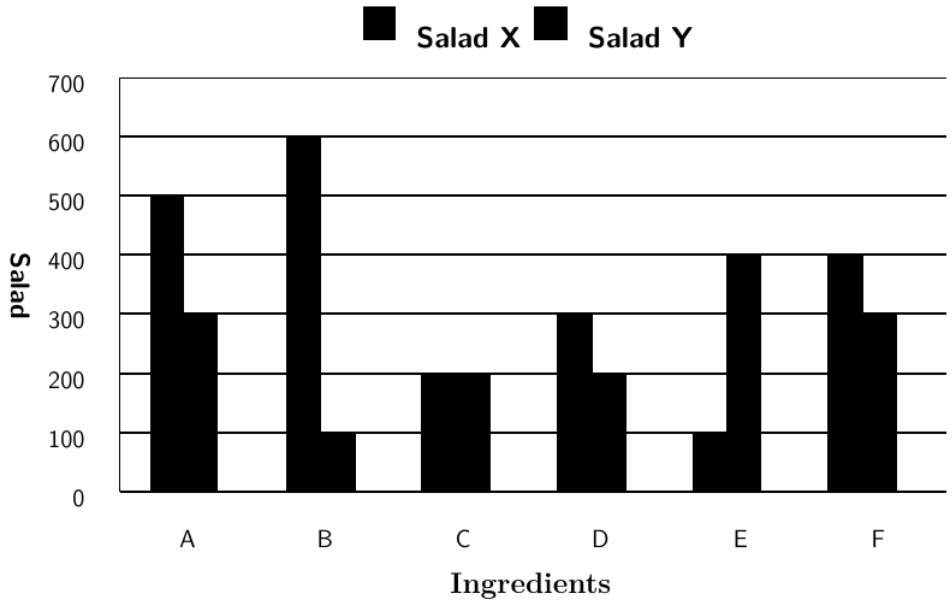


Q2. The bar graph shows the population density of 6 countries in 2000 and 2010.

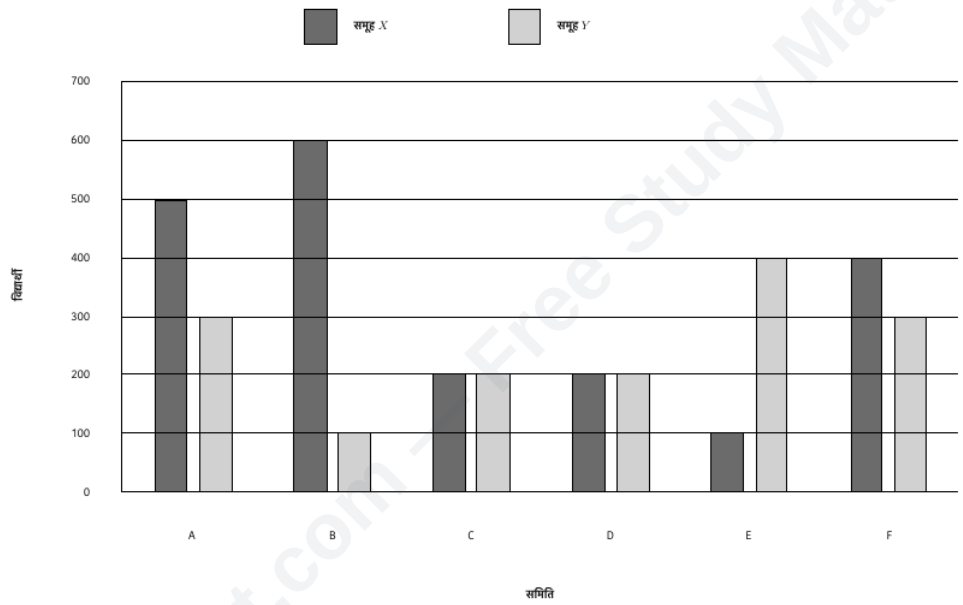
If the population of country B is 10 million in 2000 and the population of country D is 6 million in 2010, how much more is the area of country B than the area of country D, where population density is measured as the number of people per 100 square kilometers.

(a) 500%
(b) 20%
(c) 400%
(d) 25%

Directions



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Q3. The bar graph shows all the ingredients (in grams) required to make two types of salads, X and Y. If Ingredient B of Salad X is reduced by 100 grams and Ingredient E of salad Y is increased by 25% then salad Y would be lighter than salad X by _____.

(a) 37.50%
(b) 25%
(c) 20%
(d) 22.50%

Q4. In a steady-flowing river, a boat goes a certain distance upstream at a speed of 12 km/h and comes back the same distance at 24 km/h. Find the average speed for the total journey.

(a) 15 km/h
(b) 16 km/h
(c) 18 km/h
(d) 20 km/h

Q5. Find mass of an iron cube of side 2 cm. (Density of iron is 7.8 gm/cm^3)

(a) 3.9 gm
(b) 0.975 gm
(c) 15.6 gm
(d) 62.4 gm

Q6. Two cars, X and Y, travel from A to B at average speeds of 50 km/hr and 75 km/hr respectively. If X takes 2 hours more than Y for the journey, then the distance between A and B in km is _____.

(a) 600
(b) 400
(c) 800
(d) 300

Q7. If a shopkeeper sells an item at Rs. 2,700, he makes 8% profit. If he sells the item at Rs. 3,000 what will be the percentage of profit?

(a) 12
(b) 20
(c) 10
(d) 25

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Q8. Find the highest common factor of 506 and 782.

(a) 29
(b) 34
(c) 46
(d) 22

Q9. A alone can do a task in 35 days and B alone in 14 days. If they work on it together for 5 days, then what fraction of the task is left?

(a) Quarter
(b) One-thirds
(c) Half
(d) Three fourths

Q10. $(0.1^2 - 0.025^2) \div (0.1 - 0.025) =$ _____.

(a) 0.325
(b) 0.125
(c) 0.625
(d) 0.25

Q11. Find the coordinates of the midpoint of the segment joining the points (-4, 7) and (2, 3).

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

Q12. 20 - 2[25% of (15 × 8 ÷ 6 + 12)] = _____

(a) 4
(b) 6
(c) 10
(d) 8

Q13. If a - b = 5 and ab = 14, then find $a^2 + b^2$.

(a) 53
(b) 27
(c) 5
(d) 19

Q14. Find the value of 5 sin θ - 2 cosec θ, if θ = 30°.

(a) 3/2
(b) • 3/2
(c) 2/3
(d) • 2/3

Q15. In a certain gear train, the driver has 18 teeth while the follower has 8 teeth. For every 16 turns of the driver, the follower turns _____ times.

(a) 18
(b) 8
(c) 36
(d) 9

Q16. If 5x/2 - 1/4(6x - 5/3) = 7/6, then the value of x is _____.

(a) 5/4
(b) 3/4
(c) 3/7
(d) 5/7

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Q17. If the amount received at the end of 1^(st) and 2^(nd) year at compound interest on a certain principal is Rs. 1,350 and Rs. 1,458 respectively, what is the rate of interest?

(a) 10%
(b) 15%
(c) 12%
(d) 8%

Q18. A trader buys 60 bags of grain at Rs. 400 each. If he sells 18 bags at 8% profit, at what price should he sell the remaining bags to make 16.4% overall profit on selling the 60 bags?

(a) Rs. 480
(b) Rs. 500
(c) Rs. 540
(d) Rs. 520

Q19. If A, B and C can do a task working alone in 12, 18 and 36 days respectively. They all work together for 2 days, then B quits. How many days A and C working together will take to complete the remainder of the task?

(a) 6
(b) 3
(c) 4
(d) 9

Q20. What is the area (in cm^2) of an equilateral triangle of side 8 cm?

(a) $32\sqrt{3}$
(b) $8\sqrt{3}$
(c) $64\sqrt{3}$
(d) $16\sqrt{3}$

Q21. A and B start to walk from point P towards point Q. The distance between P and Q is 9 km. B starts 4 minutes after A. A, on reaching Q, immediately returns and after walking a kilometre meets B. If A's speed is a kilometre in 10 minutes, what is B's speed in kilometres per minute?

(a) 1/15
(b) 1/8
(c) 1/12
(d) 1/6

Q22. Pipe A can fill a tank in 6 hours. Pipe B can empty it in 15 hours. If both the pipes are opened together, then the tank will be filled in how many hours?

(a) 9
(b) 8
(c) 12
(d) 10

Q23. When a number is increased by 36, it becomes 109% of itself. What is the number?

(a) 300
(b) 450
(c) 360
(d) 400

Q24. A bullet travels 90 m in 0.2 seconds. Find its speed in km/hr.

(a) 162
(b) 1,620
(c) 1,250
(d) 125

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Q25. An executive earns a salary of Rs. 12,600 every month, and he spends 5/7 of it. If his salary increases by 1/3^(rd) and his spending increases by 1/5^(th) of the present expenditure, what fraction of his salary will he save?

(a) 7/16
(b) 8/15
(c) 7/15
(d) 5/14

Q26. If 3A = 6B = 7C; find A : B : C.

(a) 12 : 7 : 3
(b) 7 : 12 : 6
(c) 14 : 7 : 6
(d) 7 : 3 : 12

Q27. Find x if the mean of the numbers 10, 4, 1, 15, 15, x, 12 and 14 is 10.

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

Q28. If √X + 0.24 = √0.1296 then find X.

(a) 0.0144
(b) 0.12
(c) 1.44
(d) 0.0012

Q29. The weights of 3 boxes are 4, 7 and 10 kilograms. Which of the following CANNOT be the total weight, in kilograms, of any combination of these boxes?

(a) 14
(b) 21
(c) 17
(d) 18

Q30. The author of 'The Monk Who Sold His Ferrari' is _____.

(a) Arvind Adiga
(b) Robin Sharma
(c) Manohar Malgonkar
(d) Arundhati Roy

Q31. Find the work done (in kJ) if a force of 750 N pushes a cart of mass 30 kg by 16 m.

(a) 24
(b) 12
(c) 36
(d) 48

Q32. Which hazardous substance can cause lung cancer?

(a) Benzene vapours
(b) Asbestos particles
(c) Herbicides
(d) Aluminum

Q33. _____ is the physiological adjustment by an organism to environmental change.

(a) Bioremediation
(b) Bioaccumulation
(c) Cogeneration
(d) Acclimation

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Q34. Which of the following gases is a highly poisonous, odourless, tasteless and colourless gas?

(a) Carbon dioxide
(b) Carbon monoxide
(c) Methane
(d) Nitrogen dioxide

Q35. Green and yellow vegetables in our diet mostly provide us which element as food?

(a) Copper
(b) Sodium
(c) Zinc
(d) Potassium

Q36. Binary 110110101 is equal to decimal _____.

(a) 333
(b) 437
(c) 349
(d) 477

Q37. A/An _____ is software used to maintain the security of a private network.

(a) malware
(b) encryption
(c) firewall
(d) clickbait

Q38. Who was the chairman of the Constitution Drafting Committee?

(a) Jawaharlal Nehru
(b) Dr. B R Ambedkar
(c) Dr. Rajendra Prasad
(d) Sardar Patel

Q39. The Umaid Bhawan Palace is in which city?

(a) Jaipur
(b) Jodhpur
(c) Bikaner
(d) Udaipur

Q40. Classical musician Shivkumar Sharma is associated with which musical instrument?

(a) Shehnai
(b) Tabla
(c) Violin
(d) Santoor

Q41. Which of the following folk dances is from Assam?

(a) Giddha
(b) Lezim
(c) Nati
(d) Bagurumba

Q42. -100° Celsius = _____ Fahrenheit

(a) -373°
(b) -148°
(c) 173°
(d) -212°

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Q43. If 36 J of work is done in moving a charge Q across 8 V, find Q (in coulombs).

(a) 288
(b) 9
(c) 4.5
(d) 16

Q44. What is the relative density of a solid of mass 50 gm which when fully immersed in water weighs 10 gm?

(a) 5
(b) 1.25
(c) 2.5
(d) 0.8

Q45. If the speed of a car increases from 54 km/hr to 90 km/hr, its kinetic energy increases in the ratio of _____.

(a) 3/5
(b) 9/4
(c) 9/16
(d) 9/25

Q46. Find the length (in cm) of the edge of a cube of a piece of wood which weighs 80 N. (Use g = 10 m/s^2, density of wood = 1 g/cm^3)

(a) 60
(b) 20
(c) 80
(d) 40

Q47. Two resistors of R Ω and 60 Ω are connected in parallel to get an effective resistance of 24 Ω. Find R.

(a) 56
(b) 64
(c) 48
(d) 40

Q48. Farad per meter is the unit of _____.

(a) watt per steradian
(b) permittivity
(c) permeability
(d) electric conductance

Q49. A _____ map converts color intensity or grayscale information to heights to give the appearance that features are raised above the surface, like embossed letters.

(a) shade
(b) bump
(c) tone
(d) tint

Q50. A truck of mass 5000 kg accelerates from 25 m/s to 35 m/s. Find the change in its kinetic energy (in MJ).

(a) 1
(b) 2.5
(c) 1.5
(d) 2

Q51. Which of the following recipients of the Dadasaheb Phalke Award received it posthumously?

(a) Vinod Khanna
(b) Satyajit Ray
(c) Naushad
(d) Durga Khote

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Q52. To _____ is to prepare a storage medium, usually a disk, for reading and writing.

(a) format
(b) defrag
(c) map
(d) boot

Q53. Which of the following is the correct relation between resistance ‘R’, conductivity ‘σ’, length ‘L’ and area of cross section ‘A’ of a metal wire?

(a) RL = Aσ
(b) RσA = L
(c) RA = Lσ
(d) σ = RL/A

Q54. Which team won the Indian Premier League (IPL) in 2018?

(a) Sunrisers Hyderabad
(b) Chennai Super Kings
(c) Royal Challengers Bangalore
(d) Kolkata Knight Riders

Q55. Antihistamines are found in some first-aid boxes. When should these drugs be taken?

(a) To aid in clotting of blood
(b) To ease the symptoms of hay fever and other allergies
(c) To ease the indigestion and heartburn
(d) To bring relief from asthma

Q56. Acceleration due to gravity on moon is 1/6^(th) that on earth. How much would an astronaut weigh on the moon if he weighs 90 kgf on earth? (acceleration due to gravity on earth = 10 m/s²)

(a) 15 N
(b) 150 N
(c) 90 N
(d) 9 N

Q57. Which of the following is NOT a base unit?

(a) mole
(b) ampere
(c) radian
(d) candela

Q58. Who invented the blue jeans?

(a) Levi Strauss
(b) Todd Oldham
(c) Calvin Klein
(d) Gianni Versace

Q59. Find the potential difference (in V) across a resistance of 2.5 kΩ through which a 2 mA current flows.

(a) 5
(b) 0.2
(c) 1.25
(d) 0.8

Q60. The Living Planet Report, released every two years, is the flagship publication of which organisation?

(a) The Nature Conservancy
(b) World Wide Fund for Nature
(c) Conservation International
(d) Wildlife Conservation Society

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Q61. The sum of two binary numbers 1101111 and 1100101 is _____.

(a) 100011100
(b) 100000110
(c) 11110000
(d) 11010100

Q62. The National Skills Development Corporation (NSDC) is a public-private partnership formed under India's _____.

(a) Ministry of Finance
(b) Ministry of Electronics & Information Technology
(c) Ministry of Corporate Affairs
(d) Ministry of Science & Technology

Q63. The resistance of a metal rod depends on all of the following, except _____.

(a) resistivity
(b) density
(c) length
(d) temperature

Q64. Find the missing number in the given series.

-1.3, -0.8, -0.3, ?, 0.7, 1.2

(a) 0.1
(b) 0.3
(c) 0.4
(d) 0.2

Q65. One statement is given, followed by two assumptions, I & II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You are to decide which of the given assumptions can definitely be drawn from the given statement.

Statement: "You are appointed as a trainee accountant on temporary basis. Your employment status will automatically be converted to permanent on submission of pass result of M Com final exam." — Extract from an appointment letter.

Assumptions:

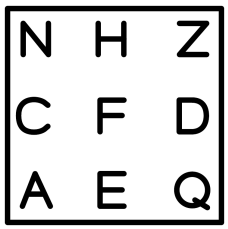
I. M Com final exam is a reasonable proof of an accountant's capability.

II. All trainees are appointed on temporary basis.

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

Q66. Choose the figure which is different from the rest.

(a)



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(b)

Z	C	H
F	A	N
O	D	E

(c)

H	D	N
F	O	Z
C	E	A

(d)

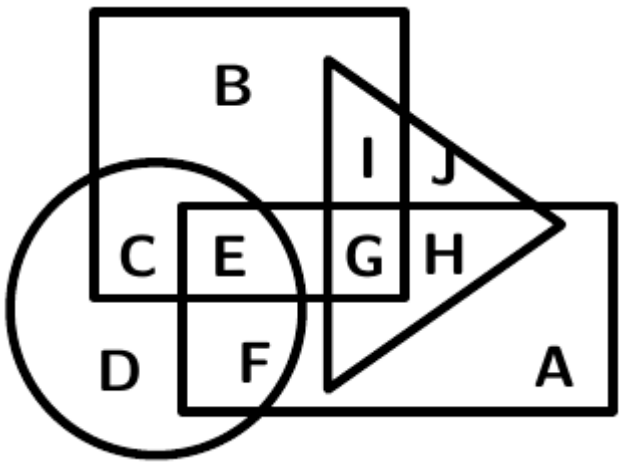
A	C	Q
Z	+ D =	E
N	F	H

Q67. In a certain code language, '+' represents '×', '÷' represents '+', '-' represents '÷' and '×' represents '-'. Find out the answer to the following question.

12 ÷ 6 – 2 + 10 × 5 = ?

(a) 50
(b) 37
(c) 23
(d) 16

Q68. In the following figure, the triangle represents actors, the square represents professors, the circle represents Indians and the rectangle represents fathers. Which set of letters represents Indians who are either professors or fathers?



(a) IGH
(b) CEF
(c) E
(d) G

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Q69. Choose the letters which are different from the rest.

(a) HJL
(b) PRT
(c) VTR
(d) UWY

Q70. Select the option that is related to the third word on the same basis as the second word is related to the first word.

Letter : Envelope ? Dagger : ?

(a) Sheath
(b) Weapon
(c) Sword
(d) Sharp

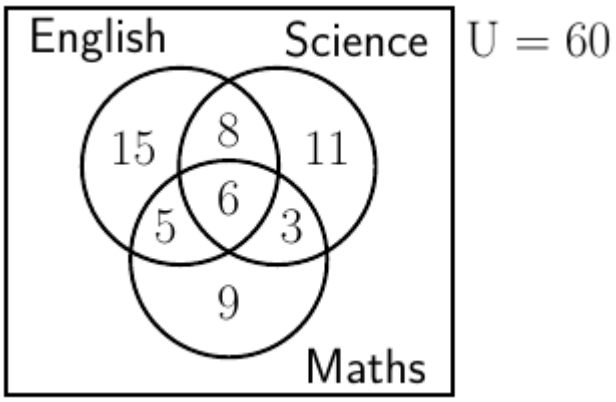
Q71. If A $ B means A is the husband of B, A # B means A is the brother of B and A * B means A is the mother of B, then what does P $ Q * R # S mean?

(a) P is the father of S
(b) P is the brother-in-law of S
(c) P is the son of S
(d) P is the brother of S

Q72. What is the angle between the hour hand and the minute hand at half past two?

(a) 105°
(b) 75°
(c) 120°
(d) 90°

Q73. The given Venn diagram shows the number of students who have passed in the three exams, viz. English, Science and Maths. How many students failed in all the three exams?



(a) 3
(b) 12
(c) 9
(d) 6

Q74. One statement is given followed by two conclusions. Decide which of the given conclusions can definitely be drawn from the given statement.

Statement: As income increases, cars become more affordable.

Conclusion I: With greater use of technology, cars are now cheaper than they were a generation ago.

Conclusion II: Cars will become so numerous that no future technology will solve the traffic problem.

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

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Q75. A postman starts from the post office and cycles 13 km south, then turns west and cycles 10 km, then turns north and cycles 8 km, then turns east and cycles 2 km and then turns to his left and cycles 5 km. Where is he now with reference to his starting position?

(a) 8 km east
(b) 12 km east
(c) 12 km west
(d) 8 km west

Q76. Here are some words from an artificial language.

unacri means lighthouse

bancri means lightweight

banetu means overweight

Which word would mean 'overdrive'?

(a) adiban
(b) adietu
(c) simuna
(d) criteh

Q77. At present, the ratio between the ages of Anu and Dimpy is 5 : 8. After 2 years, the ratio of their ages will become 2 : 3. What was Dimpy's age before 2 years?

(a) 10
(b) 12
(c) 16
(d) 14

Q78. In the question, two statements are given, followed by three conclusions, I, II and III. You have to consider the statements to be true even if they seem to be at variance with commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement:

All flags are banners.

Some flags are emblems.

Conclusion:

I. Some emblems are banners.

II. All banners are emblems.

III.No emblems are banners.

(a) Only conclusion I follows
(b) Only conclusion III follows
(c) All conclusions I, II and III follow
(d) Only conclusion I and III follow

Q79. Choose the one which is different from the rest.

(a) Father
(b) Son
(c) Mother-in-law
(d) Brother

Q80. Select the option that is related to the third word on the same basis as the second word is related to the first word.

Poem : Stanza ? Book : ?

(a) Language
(b) Story
(c) Page
(d) Printing

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Q81. If 8 # 12 = 10; 5 # 9 = 7; 6 # 10 = 8, then find the value of 14 # 4.

(a) 10
(b) 9
(c) 5
(d) 3

Q82. In a certain code DIRTY is coded as 24759 and FOAM is coded as 1863. Using the same code ARID will be coded as _____.

(a) 2489
(b) 9165
(c) 1579
(d) 6742

Q83. In the following question, which set of letters and numbers, when sequentially placed at the gaps in the given series, shall complete it?

1_2x_bb_yy_cc_6zzz

(a) a345c
(b) 3a45b
(c) 3a4b5
(d) 3a45c

Q84. A said to B, “You are my husband’s daughter-in-law’s son.” How is B related to A?

(a) B is the father of A
(b) B is the grandson of A
(c) B is the brother of A
(d) B is the son of A

Q85. In the question, two statements are given, followed by two conclusions, I, and II. You have to consider the statements 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, follows from the given statements.

Statement 1: Some wagons are buggies.

Statement 2: All wagons are carts.

Conclusion I: All buggies are carts.

Conclusion II: Some carts are buggies.

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

Q86. Rearrange the parts of the sentence in the correct order.

A customer based on reasons

X- chances are that they actually made the change

Y- may not come out of the changing room, but

Z- which is unfortunately inappropriate

(a) YXZ
(b) ZYX
(c) XZY
(d) ZXY

Q87. Find the power (in W) of a pump if it can lift 1 tonne of water by 90 m in 30 minutes. (Assume 100% efficiency and use g= 10 m/s^2)

(a) 50
(b) 250
(c) 25

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(d) 500

Q88. Which of the following is an example of a first class lever?

(a) Ice tongs
(b) Wheel barrow
(c) A pair of scissors
(d) Nut cracker

Q89. _____ curves employ at least three points to define a curve. The two endpoints of the curve are called anchor points. The other points, which define the shape of the curve, are called handles, tangent points, or nodes.

(a) Bicorn
(b) Bezier
(c) Deltoid
(d) Kappa

Q90. Find the efficiency of a pulley system which has a mechanical advantage of 2.5 and where the load lifts by 2.5 meters on pulling the rope by 10 m.

(a) 62.50%
(b) 25.00%
(c) 40.00%
(d) 100.00%

Q91. _____ is when we cover a surface with a pattern of flat shapes so that there are no overlaps or gaps.

(a) Tessellation
(b) Tracking
(c) Gradient
(d) Kerning

Q92. If half a litre of hot water at 90°C is mixed with three and a half litres of cold water at 10° C, find the final equilibrium temperature (in °C) if no heat is lost.

(a) 20
(b) 40
(c) 30
(d) 50

Q93. Two children, weighing 30 kg and 15 kg, sit on one side of a see-saw at a distance of 1 m and 1.2 m respectively, from the fulcrum. A boy of 'M' kg sits on the other side of the see-saw at a distance of 1.2 m from the fulcrum, and the see- saw is in equilibrium. Find M.

(a) 36
(b) 45
(c) 48
(d) 40

Q94. Find the heat capacity of a pan of mass 200 g, if its temperature rises by 8° C on receiving 2000 J of heat.

(a) 250 JK^(-1)
(b) 5 JK^(-1)
(c) 50 Jkg^(-1)K^(-1)
(d) 1.25 Jkg^(-1)K^(-1)

Q95. 210 mm × 297 mm are the dimensions of _____ size paper.

(a) A4
(b) A2
(c) A3
(d) A1

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Q96. The sentences given in the question, which, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

Outside their window there was a vine with attractive foliage, but it started shedding leaves one by one as summer passed through fall into winter.

A - Came dawn, when Johnsy looked out of the window from her sick bed, lo and behold, the leaf was still there and it continued to be there on the following days.

B - Finally, only one last leaf remained. Johnsy told Sue that when that leaf fell, her life would also go.

C - The girl regained her will to live and was fully recovered in a few days.

D - A concerned elderly artist friend of the girls, hearing this story, climbed outside the window in the bitterly cold night and painted a life-like leaf at the spot from where the last leaf had just fallen.

(a) BDCA
(b) BDAC
(c) DBCA
(d) DBAC

Q97. An object with greater _____ has greater inertia.

(a) velocity
(b) acceleration
(c) volume
(d) mass

Q98. Find the specific heat capacity (in Jg^(-1)K^(-1)) of a block of metal of mass 500 g, the temperature of which rises by 80°C when it absorbs 10 kJ of heat?

(a) 0.4
(b) 0.16
(c) 1.56
(d) 0.25

Q99. Find the specific latent heat of vaporisation of 1.25 g of nitrogen (in Jg^(-1)), if it releases 250 Joules of heat when it condenses at its boiling point of 196° C.

(a) 469
(b) 500
(c) 312.5
(d) 200

Q100. An arrowhead at the end of a dimension line is approximately _____ long and 1 mm wide.

(a) 3 mm
(b) 5 mm
(c) 1 mm
(d) 1.5 mm

PART B

Q101. The power source in pneumatic system is _____

(a) Air receiver
(b) Compressor
(c) Valve
(d) Muffler

Q102. The main mechanical property of aluminium is _____.

(a) Strongness
(b) Brittleness
(c) Softness

(d) Toughness

Q103. Which one of the following is used to rectify damaged or rusted threads?

(a) Two-piece die
(b) Die nut
(c) Circular split die
(d) Die plate

Q104. The head stock of a lathe is situated at the

(a) right hand end of the lathe bed
(b) left hand end of the lathe bed
(c) middle of the lathe bed
(d) bottom of the lathe bed

Q105. Identify the file having flat, triangular face with teeth on the wide face only used for finishing sharp corners.

(a) Riffler file
(b) Crossing file
(c) Barrette file
(d) Mill saw file

Q106. 'GO' and 'NO GO' gauge is a type of

(a) Limit gauge
(b) Ring gauge
(c) Slip gauge
(d) Plug gauge

Q107. The SI Unit of torque is _____

(a) $N\text{-}m^2$
(b) $N^2\text{-}m$
(c) N-m
(d) N

Q108. Which of the following is best gauge/machine to inspect the parallel screw ring gauges?

(a) Thread gauge
(b) Plug gauge
(c) Comparators
(d) Ring gauge

Q109. Apart from reducing friction, what is the secondary purpose of the lubrication?

(a) Reducing corrosion
(b) Limited Motion
(c) Maintaining Pressure
(d) Limited rotation

Q110. Which material's pipe is used for drainage pipeline?

(a) Brass pipe
(b) G.I. Pipe
(c) Steel Pipe
(d) Ceramic

Q111. Which of the following, when mixed with water, gives a coolant for the metal cutting?

(a) Vegetable oil
(b) Soluble oil
(c) Mineral oil
(d) Coconut oil

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Q112. Which portion of a lathe is used to give depth to the cut?

(a) Lead screw
(b) Cross slide
(c) Tail stock
(d) Compound slide

Q113. A series of processes to joint various parts to get a complete product is known as _____

(a) storing
(b) queuing
(c) assembling
(d) disassembling

Q114. Which of the following gauges is used to check the inside taper hole?

(a) Thread gauge
(b) Rectangular gauge
(c) Taper plug gauge
(d) Square gauge

Q115. What is the percentage of carbon in steel?

(a) Less than 2%
(b) More than 50%
(c) Greater than 2%
(d) 100%

Q116. In production, Jig is a device which:

(a) holds the cutting tool and guides the work piece
(b) guides both work piece and cutting tool
(c) guides the cutting tool
(d) holds the work piece and does not guide the cutting tool

Q117. Which of the following keys is used for connecting the pulley with shaft?

(a) Woodruff key
(b) Gib head key
(c) Flat saddle key
(d) Taper Key

Q118. Boring is a process of _____.

(a) finishing the hole
(b) making external threads
(c) enlarging a hole
(d) making a hole

Q119. Which is the most common shape of a nut?

(a) Flat
(b) Round
(c) Square
(d) Hexagonal

Q120. Which of the following is the most common type of cutting fluid used in almost all the machining operation?

(a) Lard oil
(b) Synthetic Oil
(c) Olive oil
(d) Soluble oil

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Q121. Pipe cutting die is generally _____.

(a) divided in four parts
(b) undivided
(c) divided in three parts
(d) divided in two parts

Q122. What is the thickness of washer required, when the nominal diameter of bolt is considered as D?

(a) 0.09 D
(b) 0.12 D
(c) 0.7 D
(d) 0.1 D

Q123. Angle of Knuckle thread is _____

(a) 55°
(b) 60°
(c) 30°
(d) 45°

Q124. The Polygon effect is observed in _____ (Choose the correct option)

(a) Shaft drive
(b) Gear drive
(c) Chain drive
(d) Belt drive

Q125. What is the size of drilled hole required for M10 × 1 mm in metric drill?

(a) 9.1 mm
(b) 8 mm
(c) 10 mm
(d) 7.1 mm

Q126. Which of the following is not a tool is not used in Sheet metal operation?

(a) Snip
(b) Power Shear
(c) Milling Cutter
(d) Mallet

Q127. Which of the following is a sheet metal forming process?

(a) Knurling
(b) Facing
(c) Drilling
(d) Rolling

Q128. Which of the following components of spur gear's force assists the rotation on driven gear?

(a) The worm and worm wheel
(b) The radial component
(c) The axial component
(d) The tangential component

Q129. Which of the following is not a part of rivet?

(a) Head
(b) Point
(c) Thread
(d) Shank

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Q130. A bench vice body is made of _____.

(a) cast iron
(b) forged steel
(c) aluminium alloy
(d) steel

Q131. Dial gauge typically measure in the range of _____.

(a) 600 mm to 700 mm
(b) 400 to 500 mm
(c) 800 to 900 mm
(d) 0.25 to 300 mm

Q132. Alumina is prepared from _____.

(a) aluminium
(b) copper
(c) bauxite
(d) galena

Q133. Which bolts are fitted on machine Table T-Slots

(a) T-headed bolt
(b) Flange bolt
(c) Hook bolt
(d) Hexagon-headed bolt

Q134. If one of the belts of a multiple V-belt drive is broken, then we should replace _____

(a) all the belts
(b) the broken belt and the belts on right side
(c) the broken belt only
(d) the broken belt and the belts of left side

Q135. V belt having which shape of cross section

(a) Rectangular
(b) Square
(c) Circular
(d) Trapezoidal

Q136. What are the two arms of forklift called?

(a) tail
(b) gibb
(c) fork
(d) head

Q137. What is the LMC of shaft having tolerance with size φ 24.6 ± 0.5

(a) φ 25.1
(b) φ 24.1
(c) φ 24
(d) φ 24.6

Q138. Clamp diodes used in comparators _____

(a) To protect the op-amp from damage.
(b) To develop the input offset current
(c) To increase the output voltage
(d) To increase the gain of op-amp.

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Q139. In an assembly, Hole size is smaller than shaft size then this type of fit is known as _____

(a) Clearance fit
(b) Interference fit
(c) Transition fit
(d) Sliding fit

Q140. Bore gauge is used for measuring the _____.

(a) depth of a hole
(b) diameter with an accuracy of 0.05 mm
(c) outside diameter of a shaft shaft
(d) inside diameter of a hole

Q141. Split pin is used for locking _____ nut.

(a) castle
(b) square
(c) flange
(d) wing

Q142. Recess height can be measured by _____ micrometer.

(a) outside
(b) inside
(c) depth
(d) screw thread

Q143. Which bolt is commonly used in marine shaft couplings?

(a) Ellen bolt
(b) Eye bolt
(c) Headless tapered bolt
(d) Hexagonal bolt

Q144. Which one of these is a characteristic of high viscosity fluid (choose the appropriate option)

(a) Semi-liquid state
(b) Less power consumption
(c) Slow operation
(d) Pressure drop

Q145. Which of the following is a striking tool?

(a) V-Block
(b) Ball peen hammer
(c) File
(d) Scribing block

Q146. The process of removing stock from a metal surface is known as _____

(a) soldering
(b) brazing
(c) honing
(d) coating

Q147. What kind of bearing is footstep bearing?

(a) Static load bearing
(b) Torsional load bearing
(c) Tangential load bearing
(d) Thrust load bearing

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Q148. A tapping hole should be _____ the tap size.

(a) equal to
(b) 10 mm bigger than
(c) larger than
(d) smaller than

Q149. Making a hole in a metal piece is called _____.

(a) finishing
(b) drilling
(c) facing
(d) knurling

Q150. Zinc is a _____.

(a) non-ferrous metal
(b) ferrous metal
(c) non-metal
(d) type of steel

Q151. Which of the following types of jig is used for machining in more than one plane by single setting?

(a) Open type jig
(b) Box type jig
(c) Plate type jig
(d) Template jig

Q152. The fixing of different parts of a machine properly as per the requirement is called _____.

(a) unpacking
(b) alignment
(c) dismantling
(d) checking

Q153. It works on the principle of rake & pinion.

(a) Vernier bevel protactor
(b) Dial test indicator
(c) Vernier height gauge
(d) Micrometer

Q154. Galvanizing is generally done on _____.

(a) non-metallic substance
(b) non-ferrous metal
(c) low carbon steel
(d) cast iron

Q155. How is power transmission achieved in positive contact clutches?

(a) Minor part is achieved by friction.
(b) Major part is achieved by friction
(c) It is achieved through friction.
(d) It is achieved by shear contact

Q156. The resistance of fine thread unscrewing is _____

(a) low
(b) high
(c) medium
(d) not so good

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Q157. How do you recognize a drill for soft metal

(a) By the large helix angle
(b) Based on cutting parameters
(c) By the small helix angle
(d) Based on required hole diameter

Q158. What is the die nut?

(a) A die which is used for shaping
(b) A die in the shape of a nut
(c) A forged nut
(d) A nut for tightening a die

Q159. Which of the following measuring gauge is used to measure the Diameter of 0.6 mm hole

(a) Screw gauge
(b) Ring gauge
(c) Pin gauge
(d) Internal micrometer

Q160. Which of the following tests is used for inspection of cooling systems?

(a) static
(b) dynamic
(c) ordinary
(d) critical

Q161. Which of the following valves is used to prevent product flow in a wrong direction?

(a) Seat valve
(b) Half turn valve
(c) Check valve
(d) Butterfly valve

Q162. What will be the DC range in solenoids pneumatic systems?

(a) 110 V to 220 V
(b) 220 V to 250 V
(c) 230 V to 440 V
(d) 12 V to 24 V

Q163. Which of the following lubricants is obtained by fractional distillation of petroleum?

(a) Coolant
(b) Synthetic oils
(c) Mineral Oils
(d) Fatty oils

Q164. The actual difference between the surface speed of the belt and pulley is known as _____.

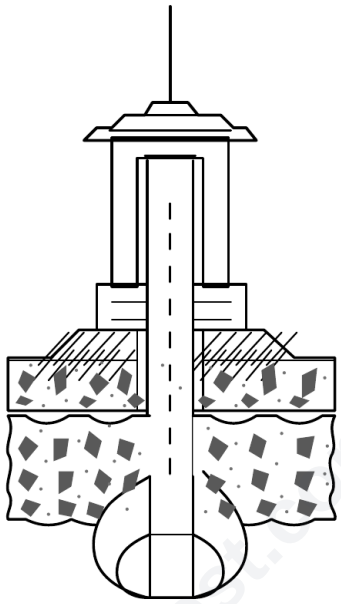
(a) dressing
(b) torque
(c) slip
(d) creep

Q165. Two pulleys mounted on driven shaft and one pulley on driving shaft of a flat belt drive is a _____

(a) Cross pulley drive
(b) Fast and loose pulley drive
(c) Multiple belt drive
(d) Idle pulley drive

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Q166.



In the above figure, what is the name of the bolt?

(a) Bent foundation bolt
(b) Lewis foundation bolt
(c) Eye foundation bolt
(d) Rag foundation bolt

Q167. Which of the following types of maintenance is done on a daily basis?

(a) Routine maintenance
(b) Breakdown maintenance
(c) Ordinary maintenance
(d) Special maintenance

Q168. Which of the following is the systematic approach for maintenance?

(a) Problem – Diagnosis – Cause - Rectification
(b) Problem – Measure – Diagnosis - Rectification
(c) Problem – Cause – Diagnosis - Rectification
(d) Problem – Diagnosis – Measure - Rectification

Q169. Which abrasive is used for soft ferrous and non-ferrous metals for lapping?

(a) copper oxide
(b) Fly Ash
(c) sodium chloride
(d) Aluminium oxide

Q170. How many teeth of taper tap bottom are chamfered?

(a) 1 to 2
(b) 4 to 6
(c) 20 to 30
(d) 7 to 10

Q171. Which of the following material is not used in alloy steels?

(a) Sodium
(b) Magnesium
(c) Silicon
(d) Chromium

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Q172. Which gears can be used in intersecting shafts for power transmission (choose the correct option)

(a) Helical Gear
(b) Worm gear
(c) Bevel Gear
(d) Rack Pinion

Q173. Vernier Height gauge is used for _____. Choose the Incorrect answer.

(a) measuring height of a work piece
(b) checking right angular surfaces
(c) scribing horizontal lines on work piece
(d) scribing vertical lines on work piece

Q174. A process of joining similar metals by application of heat with or without application of pressure and addition of filter material is called _____

(a) welding
(b) nut and bolt joint
(c) soldering
(d) forming

Q175. After using a carbon dioxide fire extinguisher, the nozzle gets extremely cold. What does this indicate?

(a) You should not use it.
(b) The material inside is finished.
(c) It is safe to continue.
(d) The materials inside are running low

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
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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										

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