

PART - A**Question Booklet Set - C**

Paper II

= DY.

both posts
GEN MANAGER
Honey plant, Jalandhar
Manager Cannaries
Jalandhar

Instructions :

1. Do not open this booklet until you are instructed to do so.
2. Use of calculator, mobile phone or any other electronic device is strictly NOT allowed.
3. Handover the OMR answer sheet to the invigilator after the examination is over.
4. There are 60 multiple choice questions (four choices a, b, c, d with one right / appropriate choice) in the question paper booklet.
5. Select the right / appropriate choice from the options given in each question. Each correct answer will carry one mark.
6. There is NEGATIVE marking in the question paper. 0.25 marks will be deducted for each wrong answer.
7. Time limit for the test is 1 hour.
8. Do not fold / spoil the OMR answer sheet. Do not make stray marks on the OMR answer sheet.
9. For rough work, the space marked 'Rough Work' at the end of question booklet may be used.
10. OMR Answer Sheet is not to be taken out of the Examination Hall. Any candidate found doing so would be expelled from the examination and the matter will be reported to the police.
11. Kindly check your question booklet and OMR answer sheet before start answering. Make sure that no page or question is missing from the question booklet or the OMR answer sheet is damaged. If any defect is found in the question booklet or OMR answer sheet, the same should be got replaced from the invigilator within 10 minutes of the start of examination.

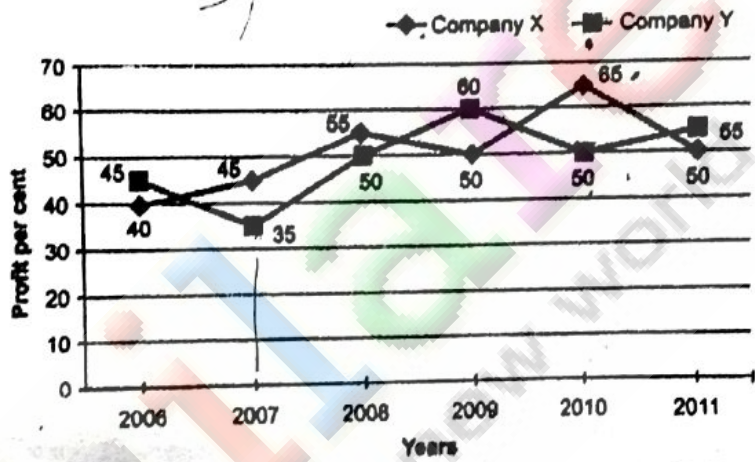
Open this booklet only when instructed

- The sum of a number and its square is 20. Then the number is :
 a) -5 or 4 b) 2 or 3 c) -5 only d) 5 or -4
- If the price of rice rises by 25%, then by how much percent must a man reduce his consumption in order to keep his budget the same as before ?
 a) 15 % b) 20 % c) 25 % d) 30 %

Directions (Q. Nos. 3-6) : Study the following graph and answer the questions :

Percentage profit earned by two companies X and Y over the given years

$$\text{Profit per cent} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$



Handwritten notes on the left side of the graph:
 use 1
 $\frac{95}{100} = 0.95$
 $\frac{170}{100} = 1.7$

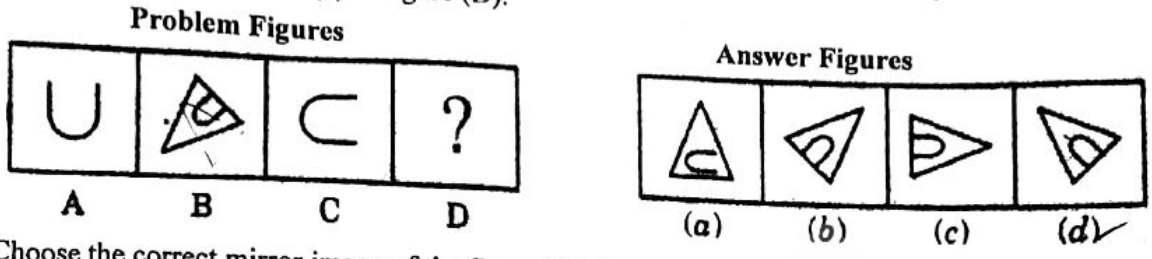
Handwritten notes on the right side of the graph:
 $2 \times 1.25 = 1.25 \times 2$
 $1.25 \times \frac{30}{100}$
 $2 \times \frac{85}{100} = \frac{170}{100}$
 $\frac{15}{20}$

- The incomes of two companies X and Y in 2010 were in the ratio of 3:4 respectively. What was the respective ratio of their expenditures in 2010 ?
 a) 7 : 22 b) 14 : 19 c) 15 : 22 d) 27 : 35
- If the expenditure of company Y in 2007 was ₹ 220 crore, what was its income in 2007 ?
 a) ₹ 312 crore b) ₹ 297 crore c) ₹ 283 crore d) ₹ 275 crore
- The expenditure of company X in the year 2008 was ₹ 200 crore and the income of company X in 2008 was the same as its expenditure in 2011. The income of company X in 2011 was :
 a) ₹ 465 crore b) ₹ 385 crore c) ₹ 335 crore d) ₹ 295 crore
- If the incomes of two companies were equal in 2009, then what was the ratio of expenditure of company X to that of company Y in 2009 ?
 a) 6 : 5 b) 5 : 6 c) 11 : 6 d) 16 : 15
- Pointing to a lady, a man said, "The son of her only brother is the brother of my wife." How is the lady related to the man ?
 a) Mother's sister b) Grandmother c) Sister of father-in-law d) Mother-in-law

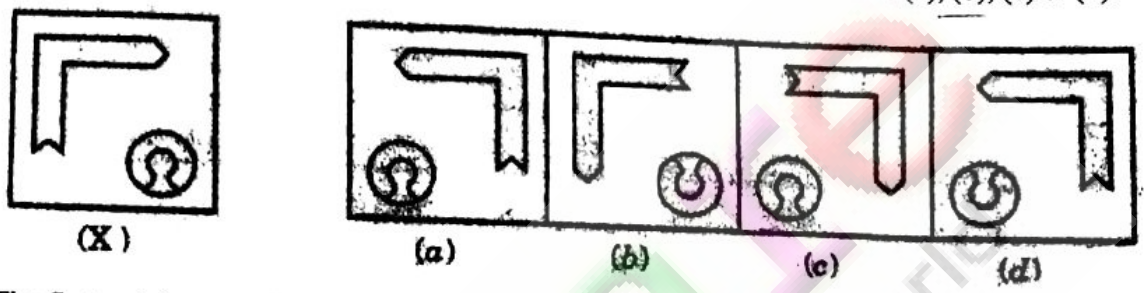
Handwritten notes on the left side of the questions:
 $2 \times \frac{220}{100} = 4.4$
 $4.4 \times 2 = 8.8$
 $8.8 - 2 = 6.8$
 $6.8 \times 100 = 680$

8. If $65a - 33b = 97$ and $33a - 65b = 1$, then what is 'ab' equal to ?
- a) 2 b) 3 c) -2 d) -3

9. There is a relationship between Problem figures A and B. Establish a similar relationship between figures C and D by selecting a suitable figure from the Answer Figures that would replace the question mark (?) in figure (D).



10. Choose the correct mirror image of the figure (X) from the four alternatives (a), (b), (c) & (d).



11. The first web browser is :
 a) Mosaic Netscape c) Internet Explorer d) Collabra
12. Which one of the following four words is odd ?
 a) Programme b) Software c) Application Peripheral
13. Which of the following is not an antivirus software ?
 a) AVG b) Avast McAfee d) Code Red
14. Arrange in ascending order the units of memory TB, KB, GB, MB.
 a) TB>MB>GB>KB b) MB>GB>TB>KB TB>GB>MB>KB d) GB>MB>KB>TB
15. What do you call a single point on a computer screen ?
 a) Cell b) Element c) Pixel Bit
16. Output which is made up of pictures, sounds and video is called :
 a) COM b) hard copy c) graphics multimedia
17. In MS-Word, you can detect spelling and grammar errors by pressing the key(s) :
 a) Shift + F7 Ctrl + F7 c) Alt+ F7 d) F7
18. Verification of a login name and password is known as :
 a) configuration b) accessibility authentication d) codification

(Handwritten marks)

19. Power Point can display data from which one of the following add-in software of MS office ?
 a) Equation editor b) Organization chart c) Photo album d) All of these
20. Which among following wildcard characters are recognized by excel ?
 a) + and - b) ! and ^ c) * and ? d) < and >
21. Pick the right option which has words related in a similar way :
 CLOTH : TEXTURE ::
 a) Body : Weight b) Silk : Cloth c) Wood : Grains d) Ornaments : Gold
22. Select the correct form of the verb/verbs for the below sentence out of the four choices given.
 Now it (seem) that fate (take) the matter out of her hands; and the insurance money would come in handy.
 a) seemed, had taken b) seems, took c) seemed, has taken d) will seem, will take
23. Select the best idiom that describes what is being said in the following statement.
 Rita felt uneasy and slightly unwell in office because of the late night party she attended the night before.
 a) to be under colour b) to be colourless c) to be coloured d) to be off colour

Directions (Q. No. 24-25) : Each of the following sentences contains an error of some kind. Read each sentence and select the option that correctly identifies its error.

24. The park was serene at twilight.
 a) Capitalization b) Punctuation c) Spelling d) Grammar
25. Was the patient's mind lucid during the evaluation.
 a) Capitalization b) Punctuation c) Spelling d) Grammar

Directions (Q No. 26-27) : Choose the option that identifies the underlined word in the sentence.

26. We should be loyal to our country.
 a) Determiner b) Article c) Preposition d) Modal
27. Everybody hates him for his repulsive looks.
 a) Verb b) Adjective c) Adverb d) Noun
28. Choose the word that has the same or nearly the same meaning as the word in capitals.
 PROHIBIT
 a) Forbid b) Forfeit c) Forsake d) Forbear

29. Rearrange the following parts in proper sequence to obtain a correct sentence.

P : youngsters in the cities and the villages
 Q : The effect
 R : of the cinema
 S : on the school and college going is very bad

- a) PRQS b) QRSP c) QPSR d) RQSP

42. Which organization has recognized 'burn-out' as medical condition and 'gaming disorder' as illness ?
 a) World Health Organization (WHO)
 b) United Nations
 c) United Nations Educational, Scientific and Cultural Organization (UNESCO)
 d) United Nations Children's Fund (UNICEF)
43. Who has become the first woman fighter pilot to fly Hawk jet ?
 a) Avani Chaturvadi b) Bhawana Kanth c) Mohana Singh d) Priya Singh
44. Who has become the Youngest Parliamentarian in the history of Indian Parliament ?
 a) Jothimani S. b) Chandrani Murmu c) Sumalatha Ambareesh d) Ramya Harida
45. Which company is India's most profitable public sector company ?
 a) Oil and Natural Gas Corporation c) Bharat Petroleum
 b) Hindustan Petroleum d) Oil India
46. What was the theme of 2019 World Earth Day ?
 a) Protect our species c) Better Water Better Jobs
 b) Nature for Water d) Water & Energy
47. Who ascended the throne in Japan, ushering in the Reiwa era after his father Akihito abdicated ?
 a) Fushimi b) Taishō c) Naruhito d) Hirohito
48. Which colour number plates should be used by all types of electric vehicles as per the guidelines issued by central government ?
 a) Green b) Blue c) Orange d) Green Yellow
49. Which nation has announced a ban on covering of the face with any kind of veil or burqa ?
 a) Australia b) United Kingdom c) Sri Lanka d) United States
50. What is the full form of VVPAT ?
 a) Voter Verified Paper Audit Trail c) Voter Verification Paper Authenticity Trail
 b) Voter Verified Process Auditing Technology d) None of these
51. What should come in place of the question mark in the following number series ?
 1, 2, 6, 21, 88, 445, ?
 a) 2230 b) 2676 c) 2580 d) 2670
52. An alloy of gold and silver weights 50g. It contains 80% gold. How much gold should be added to the alloy, so that percentage of gold is increased to 90 ?
 a) 50g b) 60g c) 30g d) 40g

Handwritten calculations and notes at the bottom of the page, including a sequence of numbers 20, 90, 40, 80, 90, 100, 120, 150, and some mathematical expressions like $50g \times \frac{80}{100}$.

Question Booklet Set - A (A)**Instructions :**

SAME PAPER-I (For both posts)
 for Dy. General Manager
 Honey Plant, Idandhar / Manager
 Camaries
 Jalandhar

1. Do not open this booklet until you are instructed to do so.
2. Use of calculator, mobile phone or any other electronic device is strictly NOT allowed.
3. Handover the OMR answer sheet to the invigilator after the examination is over.
4. There are 40 multiple choice questions (four choices a, b, c, d with one right / appropriate choice) in the question paper booklet.
5. Select the right / appropriate choice from the options given in each question. Each correct answer will carry one mark.
6. There is NEGATIVE marking in the question paper. 0.25 marks will be deducted for each wrong answer.
7. Time limit for the test is 45 minutes.
8. Do not fold / spoil the OMR answer sheet. Do not make stray marks on the OMR answer sheet.
9. For rough work, the space marked 'Rough Work' at the end of question booklet may be used.
10. OMR Answer Sheet is not to be taken out of the Examination Hall. Any candidate found doing so would be expelled from the examination and the matter will be reported to the police.
11. Kindly check your question booklet and OMR answer sheet before start answering. Make sure that no page or question is missing from the question booklet or the OMR answer sheet is damaged. If any defect is found in the question booklet or OMR answer sheet, the same should be got replaced from the invigilator within 10 minutes of the start of examination.

Open this booklet only when instructed

11-37

1. The rate of heat loss through a stainless steel slab 10cm thick which is maintained at 100°C on hot side and 30°C on the cold side. The thermal conductivity of steel is 16.37 W/m°C.
 - a) 11.459 kW/m²
 - b) 111.675 kW/m²
 - c) 34.56 kW/m²
 - d) 23.49 kW/m²
2. The principle nutrients which get increased in the parboiled rice include :
 - a) Thiamine alone
 - b) Thiamine and phosphorous
 - c) Thiamine, niacin and iron
 - d) Iron and vitamin
3. Physical hardness of which cereal grain is highest :
 - a) Rice
 - b) Jawar
 - c) Millet
 - d) Corn
4. Which of the following carbohydrates is NOT classified as dietary fibre ?
 - a) Agar
 - b) Pectin
 - c) Sodium alginate
 - d) Tapioca starch
5. A material shows a constant drying rate of 0.15 kgH₂O/(min. kg dry matter) and has an a_w of 1 at moisture content above 1.10 kgH₂O/kg dry matter. How long will it take to dry this material from an initial moisture content of 75% (wet basis) to a final moisture content 8% (wet basis) ?
 - a) 30.3
 - b) 31.3
 - c) 35.7
 - d) 82.3
6. The door to a refrigerated room is 3.048 m high and 1.83 m wide. It is opened and closed at least five times each hour and remains open for at least 1 min at each opening. Calculate the refrigeration load due to the door opening if the room is maintained at 0°C and ambient temperature is 29.4°C.
 - a) 30.9 MJ
 - b) 35.58 MJ
 - c) 76.89 MJ
 - d) 45.85 MJ
7. The objective of heating milk to about 65°C before homogenization is to inactivate :
 - a) Invertases
 - b) Lactases
 - c) Lipases
 - d) Glucose oxidase
8. Which of the following non-nutritive sweeteners contains similar calories per gram as that of sucrose ?
 - a) Saccharin
 - b) Aspartame
 - c) Sucralose
 - d) Cyclamate
9. Which one is not the by-product of oil industry ?
 - a) Lecithin
 - b) Bleaching earth
 - c) Pectin
 - d) Soap stock
10. The LMTD for counter current flow in a heat exchanger where one stream rises from 28°C to 75°C where as other flow fall from 95°C to 85°C.
 - a) 65.2°C
 - b) 13.7°C
 - c) 38.5°C
 - d) 27.9°C
11. Moisture content of potato is 85% (wet basis). In dry basis, the value will be :
 - a) 333 %
 - b) 155 %
 - c) 566.6 %
 - d) 444 %

92
75
92

10

$\frac{85}{100} = \frac{x}{100}$
 $x = \frac{85 \times 100}{100} = 85$
 $\frac{85}{100} = \frac{85}{100}$
 $\frac{85}{100} = \frac{85}{100}$
 $\frac{85}{100} = \frac{85}{100}$

12. The quantity of heat required to heat 100 L of water initially at 38°C to a final temperature of 90°C is : (The specific enthalpy of water at 33°C is 137.8 kJ/kg and that at 90°C is 136.8 kJ/kg).
- a) 23826 kJ b) 23900 kJ c) 24000 kJ d) 21000 kJ
13. One ton of Mango fruits at 35°C is to be cooled at 4°C in 8 h. The radiation and other losses are estimated to be 10 percent of the refrigeration load. Efficiency of the motor is 85 percent. Specific heat of Mango is equal to that of water. Tonnage of Refrigeration and Horse power of the motor is :
- a) 0.345 kW, 7.8 hp b) 0.234 kW, 3.4 hp c) 0.745 kW, 7.8 hp d) 0.745 kW, 3.4 hp
14. Lemon juice is passing through an SS pipe of 1" diameter, schedule 40. The specific gravity of lemon juice is 1.05 and its viscosity is 2.5 cp. The volumetric flow rate of the juice is 60 lpm. The Reynolds number is :
- a) 2004 b) 40000 c) 10000 d) 20400
15. The refrigeration load when 100 kg/h of peas is frozen from 30°C to -40°C when the peas have a moisture content of 74% is :
- a) 11.42 kW b) 43.78 kW c) 4.11 x 107 J/h d) 43.78 x 106 J/h
16. Sterilization value of a process has been calculated to be an F_0 of 2.88. If each can contains 10 spores of an organism having a D_0 of 1.5 min. Assuming that the F_0 value was calculated using the same z value as the organism. The probability of spoilage ($P_{spoilage}$) from this organism is :
- a) 0.45 b) 0.32 c) 0.12 d) 0.06
17. F value at 121°C equivalent to 99.999 % inactivation of a strain of *C. botulinum* is 1.2 min. D_0 value of this organism is :
- a) 0.43 min b) 0.24 min c) 0.65 min d) 0.12 min
18. Sealed tube containing equal number of spores of an isolate from a spoiled canned food were heated for 10 and 15 min at 115.5°C. The survivors were, respectively 4600 and 160. The lag time for heating the tubes to 115.5°C was established in prior experiments to be 0.5 min. D value is :
- a) 1.23 min b) 3.42 min c) 7.89 min d) 4.56 min
19. Which one is not the appropriate reason when oil bearing material is cooked prior to oil extraction because cooking :
- a) Coagulates protein c) Increases pressing efficiency
b) Frees oil d) cooking enhance nutritive value
20. Animal fat is extracted by :
- a) Distillation b) Mechanical extraction c) Rendering d) leaching
21. Among the fats/oils the highest amount of saturated oil is present in :
- a) Coconut oil b) Butter fat c) Beef tallow d) Palm oil

22. When wheat is stored between 16% and 30% moisture content, the mycotoxins formed is :
 a) Aflatoxin b) Ochratoxin c) Botulinum d) Salmonella
23. Drying mode commonly used in all types of cereal grain is :
 a) Radiation b) Conduction c) Convection d) Vacuum
24. The sweetness of HFS (DE: 95-96%) with respect to sucrose taken as one is : ✓
a) 1.5 b) 2.0 c) 1.8 d) 3.0
25. Denaturation of proteins means :
a) loss of primary structure c) De polymerization
 b) loss of three dimensional structure d) Coagulation
26. More than 50% of the hull is composed of :
a) Cellulose and lignin c) Cellulose
b) Lignin and pentosans d) Pentosans and Ash
27. Which of the following enzyme is responsible for off-flavor development in cream and butter ?
a) Lipase b) Protease c) Peroxidase d) None of these
28. The fiber in food that produces necessary dietary roughage is largely :
a) Cellulose b) hemicelluloses c) dextrin d) Pectin
29. The energy content of fat is how many times the energy content of protein and carbohydrate ?
a) 3 times b) 2.25 times c) 2.5 times d) 2.75 times
30. Which of the following is called milk ejection hormone ?
 a) Oxytocin b) Vasopressin c) Prolactin d) None of these
31. The shelf life of a food product at 25°C is 200 days and at 35°C is 50 days. The Q_{10} value is :
a) 5 b) 6 c) 4 d) 3
32. At ambient temperature of 30°C, if the vapour pressure of water is 4.242 kPa, the partial pressure of water vapour in the atmosphere is 2.52 kPa and atmospheric pressure is 101.325 kPa, then the relative humidity is :
a) 41.8 % b) 59.4 % c) 68.6 % d) 74.2 %
33. Hot water at a flow rate of 0.01 m³/min enters the tube side of a counter current shell and tube heat exchanger at 80°C and leaves at 50°C. Cold oil at a flow rate of 0.05 m³/min of density 800 kg/m³ and specific heat of 2 kJ/kgK enters at 20°C. The log mean temperature difference is approximately :
a) 32 °C b) 37 °C c) 45 °C d) 50 °C

34. It is desired to concentrate a 20% salt solution (20 kg of salt in 100 kg of solution) to a 30% salt solution in an evaporator. Consider a feed of 300 kg/min at 30°C. The boiling point of the solution is 110°C, the latent heat of vaporization is 2100 kJ/kg and the specific heat of the solution is 4 kJ/kgK. The rate at which the heat has to be supplied in (kJ/min) to the evaporator is :
- a) 3.06×10^5 b) 6.12×10^5 c) 7.24×10^5 d) 9.08×10^5
35. The wet basis moisture content of a particular grain is 20%. The moisture content on dry basis of that grain will be :
- a) 24 % b) 27 % c) 25 % d) 30 %
36. The greatest pressure in a spherical tank of 2 m diameter filled with oil of specific gravity 0.92, if pressure measured at the highest point in the tank is 70 kPa will be :
- a) 90.13 kPa b) 88.1 kPa c) 79.4 kPa d) None of these
37. The percentage regeneration when cold milk entering a pasteurizer at 4°C attains a temperature of 65°C after regeneration and 72°C after heating should be :
- a) 90.25 % b) 87.13 % c) 76.28 % d) 89.7 %
38. 480 kg sauce is heated in a steam jacketed kettle from 25°C to 75°C using steam at 110°C. The product heating time is 30 min. The specific heat of sauce is 3100 kJ/kg K and overall heat transfer coefficient is 300 W/m² K. The heat transfer area required is :
- a) 2.8 m² b) 3.8 m² c) 2.75 m² d) 2.4 m²
39. The amount of cream testing 35% fat that must be added to 500 kg of milk testing 4% fat to obtain cream testing 10% fat should be :
- a) 20 kg b) 100 kg c) 120 kg d) 200 kg
40. Bacterial population in milk multiplies by a factor of 200 in 18 hours of storage at 20°C temperature. The increase in population in 3 hours of storage at the same temperature is :
- a) 5.85 times b) 2.42 times c) 66.67 times d) 14.14 times

◆ ◆ ◆ ◆

Space for Rough Work