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2B2A22095 (Pages : 4) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Second Semester BVOC AUTO Degree Examination, April 2022

SDC2CA06 - Financial and Management Accounting

(2020 Admission onwards)

Time: 2 ½ hours Max. Marks: 80

PART-A
Answer *all* questions
Each question carries *two* marks
Ceiling- 25 marks

1. What is Separate Entity concept?
2. What is Double Entry system?
3. What are Nominal accounts?
4. What is Ledger?
5. State any two objects of Trial Balance.
6. What is Journal Proper?
7. What is Horizontal analysis.
8. What is meant by financial statements?
9. What is Funds Flow Analysis
10. What is Margin of Safety?
11. What is Contribution?
12. What is Angle of incidence?
13. What is Budgetary Control?
14. What is Variance?
15. What is meant by Standard costing?

PART B

Answer *all* questions
Each question carries *five* marks
Ceiling- 35 marks

16. Discuss the limitations Financial Accounting.

17. Write short notes on:

    i) Fixed assets ii) Trading Account

18. Explain any three tools of financial statements analysis.

19. Define Marginal costing. What are its assumptions.

20. Record the following transactions in cash book

    Jan.1, Opening cash balance ₹ 5,000

    Jan. 5, Rent paid ₹ 2,000

    Jan. 3, Credit sale ₹ 2,500

    Jan. 8, Interest received ₹ 3,000

    Jan.9, Cash purchases ₹ 4,000

    Jan.15, Cash sales ₹ 8,000

    Jan.16, Salaries paid ₹ 2,000

21. From the following data relating to Profit and Loss Account for the year ended 31st December, 2019 and 2020, You are required to prepare Comparative income statement.

PROFIT AND LOSS ACCOUNT

Particulars	2019	2020	Particulars	2019	2020
To Cost of goods sold	6,000	7,500	By Net Sales	8,000	10,000
To Operating expenses:					
Administrative expenses	200	200			
Selling expenses	300	400			
To Net Profit	1,500	1,900			
	8,000	10,000		8,000	10.000

22. The cost data in an industry are detailed below:

Selling price per unit Rs. 40

Marginal cost per unit Rs. 24

Fixed cost per annum Rs. 16,000

Calculate P/V Ratio and Break-Even Point.

23. The standard cost card shows the following details relating to material needed to produce 1 kg. of groundnut oil:

Quantity of groundnut required	3 kg.
Price of groundnut	₹ 2.5 kg.

Actual production data:

Production during the month	1000 kg
Quantity of material used	3,500 kg.
Price of groundnut	₹ 3 per kg.

Calculate: (a) Material Cost Variance (b) Material Price Variance

(c) Material Usage Variance

PART C

Answer any *two* questions

Each question carries *ten* marks

24. Discuss briefly the fundamental concepts and conventions of accounting.

25. Define Budgetary control. Discuss in detail various types of budgets.

26. From the following data, calculate

i) Contribution ii) Break-even point

iii) Margin of safety iv) Sales to earn a profit of ₹ 24,000

Total fixed expenses	₹ 18,000
Total variable cost	₹ 30,000
Total sales	₹ 60,000

27. From the following data draw up Trading, Profit &Loss Account and Balance sheet.

Particulars	Amount (₹)
Capital	20,000
Bank overdraft	5,000
Machinery	13,400
Cash in hand	1,000
Fixtures and fittings	5,500
Opening stock	45,000
Bills payable	7,000
Creditors	40,000
Debtors	63,000
Bills receivable	5,000
Purchases	50,000
Sales	1,29,000
Return from customers	1,000
Return to creditors	1,100
Salaries	9,000
Manufacturing wages	4,000
Commission	5,500
Trade expenses	1,500
Discount (Cr.)	4,000
Rent	2,200

The Closing stock was amounted to ₹ 52,000.

(2 x10 = 20 Marks)

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Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Second Semester BVOC AUTO Degree Examination, April 2022

SDC2AU07 - Introduction to Automobile Engineering

(2020 Admission onwards)

Time: 2 ½ hours Max. Marks: 80

PART – A

Answer ***all*** questions.

Each question carries **Two** mark.

Ceiling -25 Marks

1. Name major components of an automobile.
2. Apart from I.C. engine, what other types of power plant are used in automobiles ?
3. Name a few layouts of automobile components.
4. Enlist the advantages of turbocharged engines.
5. State the reason for the extensive use of turbocharger in Diesel engines.
6. What are the disadvantages of fuel injection?
7. Name the different types of materials used for clutch facing materials.
8. Compare semi and automatic transmissions.
9. What is the use of a propeller shaft in transmission?
10. What is power steering?
11. What happens to the kinetic energy of the vehicle during the application of brake?
12. What is unsprung weight?
13. Explain about biodiesel?
14. What is a hybrid vehicle?
15. Give examples of Fuel cell vehicles

PART – B

Answer *all* questions.
Each question carries **Five** marks.
Ceiling -35 Marks

16. State the advantages of frameless construction. What are its disadvantages?
17. How does a three-way catalytic converter work?
18. What are the advantages and disadvantages of GDI over carbureted gasoline engines?
19. Explain the CVT transmission system.
20. What are 'primary' and 'secondary' brakes?
21. What is the function of an anti-roll device in vehicles?
22. Describe the main components of Hybrid vehicles.
23. Explain the Difficulties with LPG as automotive fuel.

PART - C

Answer any *two* questions.
Each question carries **Ten** marks.

24. What is CRDI technology in Diesel engines and how does it work?
25. Draw and explain the working of Single plate and cone Clutch.
26. Explain the terms: camber, castor, steering axis inclination and toe-in. What are the effects of each on the steering characteristics of a vehicle?
27. What is alternative fuel? Describe the various types of alternative fuel for automobile engines.

2 x 10 = 20 Marks

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Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Second Semester BVOC AUTO Degree Examination, April 2022

SDC2AU08 - Instrumentation for Automobile Engineers

(2020 Admission onwards)

Time: 2 ½ hours Max. Marks: 80

PART – A

Answer *all* questions.

Each question carries **Two** mark.

Ceiling -25 Marks

1. Explain the need of Instrumentation for Automobile engineers.
2. Explain the term Range, Sensitivity, Linearity.
3. Obtain the dimension of any five electrical/mechanical quantities.
4. List out the methods for the measurement of medium resistances.
5. Draw the diagram and write down the equation for the unknown resistance in Wheatstone bridge.
6. Explain the types of Megger.
7. What do you mean by Piezo-electric material?
8. What are the different types of displacement transducers?
9. Name the common modulation technique employed for digital data transmission.
10. What is an A/D converter?
11. Explain how a gas analyzer works?
12. How the smoke from the vehicle is measured?
13. What you mean by Actuators in control systems?
14. What do you mean by detonation/ Knock in an Engine?
15. Draw a diagram of Potentiometric Angle convertor.

PART – B

Answer *all* questions.
Each question carries **Five** marks.
Ceiling -35 Marks

16. What is damping torque in a indicating instrument?

17. What is error in a measurement system? What are the different types of errors present in a system?

18. Draw the diagram and explain the working of shunt type ohm meter.

19. Explain the amplitude modulation briefly.

20. What is Hall effect transducer? Explain its applications.

21. List down Advantages of Computer-Based Instrumentation.

22. Explain the principle of gas chromatography.

23. Describe the working of a stepper motor.

PART - C

Answer any *two* questions.
Each question carries **Ten** marks.

24. Draw the diagram, working, advantages and disadvantages of POT and LVDT.

25. Explain the working of fuel quantity and Coolant temperature sensor.

26. Explain Maxwell's Inductance Bridge

27. Explain detonation sensor. Altitude sensor, flow sensor. Throttle position sensors in-detail.

2 x 10 = 20 Marks

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Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Second Semester BVOC SD Degree Examination, April 2022

SDC2IT06 - Programming in Java

(2020 Admission onwards)

Time: 2 ½ hours Max. Marks: 80

PART – A
Answer *all* questions.
Each question carries Two mark.
Ceiling -25 Marks

1 Discuss the structure of Java Program and the steps to execute it.

2 Why Java is considered a secure language?

3 Write notes on the following: Byte code and Java Virtual Machine.

4 Explain various characteristics of OOPs.

5 Explain about the stream classes in Java.

6 What is a JVM?

7 What is the purpose of a default constructor?

8 What is finalize () method?

9 Define the terms: - try and catch.

10 What is multithreading?

11 Write the usage of import statement.

12 What is delegation event model?

13 What is the use of paint () method in applet?

14 Give some applications of Applet.

15 What is JDBC?

PART – B
Answer *all* questions.
Each question carries Five marks.
Ceiling -35 Marks

16 Write a program to find sum of *n* numbers in Java.

17 Explain life cycle of thread.

18 What are packages? What are their types? How do you use them in Java Program?

19 Discuss the various Layout managers supported by Java. What is the benefit of using them?

20 Write the steps to create an applet program.

21 Discuss the Java Thread Model.

22 What is difference between Swing and AWT in Java?

23 What are the JDBC API components?

PART - C

Answer any *two* questions.
Each question carries Ten marks.

24 Write a program to add two matrices by accepting the values through keyboard.

25 What is inheritance? What are various type of inheritance methods supported in Java? How do you implement inheritance in Java Program?

26 What is an applet? Explain its working with an example?

27 Discuss the JDBC architecture in detail. Write a java program that connects a database using JDBC.

2 x 10 = 20 Marl

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Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Second Semester BVOC SD Degree Examination, April 2022

SDC2IT07 - Relational Database Management System

(2020 Admission onwards)

Time: 2 ½ hours Max. Marks: 80

PART – A
Answer *all* questions.
Each question carries Two mark.
Ceiling -25 Marks

1. What is difference between file system and database?
2. What is data model and types?
3. What is conceptual schema?
4. What are the types of entities?
5. Define candidate key
6. Define the terms i) Entity set ii) Relationship set
7. What is the concept of normalization?
8. What do you mean by functional dependencies?
9. What is data integrity? Explain the types of integrity constraints
10. What are DML and DDL commands?
11. How to change the structure of table using SQL?
12. What are the wild cards used in database for Pattern Matching?
13. Explain how procedures and functions are called in a PL/SQL block ?
14. Define two-phase locking protocol.
15. Define cursor.

PART – B

Answer *all* questions.
Each question carries Five marks.
Ceiling -35 Marks

16. What do you mean by schemas? Explain its types.
17. Explain Data Abstraction and the three level of abstraction?
18. What is key and explain different kinds of key?
19. Draw an ER diagram for a Bank database.
20. Explain about Domain Calculus
21. Define functional and multivalued dependencies.
22. What is the difference between WHERE and Having Clause?
23. What is a database trigger? Which are the different kinds of triggers?

PART - C

Answer any *two* questions.
Each question carries Ten marks.

24. Explain Architecture of DBMS?
25. Discuss relational algebra and relational calculus.
26. What is the need for normalization? Explain 1NF, 2NF, 3NF with examples.
27. Explain the control structures available in PL/SQL. (b)What are the types of blocks available in PL/SQL ?

2 x 10 = 20 Mark