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Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BVOC AUTO/BVOC SD Degree Examination, November 2022

A12 – Professional Business Skills

(2019 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 memo?
2. What are complementary closings?
3. Define e-learning.
4. What is PDF?
5. What is R Programming?
6. What is primary data?
7. What is meant by Phishing?
8. List out various types of Cyber Crimes.
9. What is SEA?
10. What is social media marketing?
11. What is Green Computing?
12. What is spam e-mail?
13. What is Cloud based e-learning?
14. List out any two disadvantages of e-books.
15. State any two problems associated with internet.

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

16. Briefly explain various remedies against hacking.
17. Differentiate between MOOCs and Formal online courses.
18. Discuss the benefits of videos in e-learning.
19. What are benefits of big data analysis.
20. Explain the weaknesses of online advertising.
21. What is e-mail etiquette? Discuss the reasons to implement e-mail etiquette rules.
22. Briefly explain any two digital marketing models.
23. Discuss the challenges faced by business analytics.

**PART - C**  
**Answer any *two* questions.**  
**Each question carries Ten marks.**

24. Define professionalism. Discuss in detail professionalism in business.
25. What is social networking analysis? Discuss its application in business.
26. What is e-governance? Discuss various e-governance initiatives in India.
27. What is digital marketing? Explain various types of digital marketing.

**(2 x 10 = 20 Marks)**

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BVOC AUTO Degree Examination, November 2022

GEC3CM11 – Human Resources Management

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

**PART – A****Answer all questions.****Each question carries 2 marks.****Ceiling -25 Marks**

1. Define Human Resource Management.
2. Explain the term 'job description'
3. Write a note on 'sensitivity training'
4. What is meant by job enlargement.
5. Give a brief of depth interview.
6. What is induction?
7. Distinguish between training and development.
8. What is meant by career planning?
9. What is mentoring?
10. Write a note on 'fringe benefits'
11. Discuss Halsey plan.
12. What do you mean by grievance?
13. What is collective bargaining?
14. What is meant by competitive advantage?
15. List the contents of job specification?



**PART – B**  
**Answer *all* questions.**  
**Each question carries 5 marks.**  
**Ceiling -35 Marks**

16. Discuss the objectives of HRM.
17. Explain job analysis process.
18. Distinguish between traditional human resource management and strategic human resource management.
19. What are the internal sources of recruitment?
20. Explain different types of employment interviews.
21. Discuss the needs of career development.
22. What are the important factors influencing wage system?
23. Discuss the approaches of discipline.

**PART - C**  
**Answer any *two* questions.**  
**Each question carries 10 marks.**

24. Define Job Evaluation. Discuss the methods of job evaluation.
25. What are the internal and external factors affecting Human Resource Planning.
26. What do you mean by 'recruitment'? Discuss its process.
27. Briefly explain the methods of performance appraisal.

**(2 x 10 = 20 Marks)**

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BVOC AUTO Degree Examination, November 2022

SDC3AU12 – Power Systems and Power Electronics

(2019 Admission onwards)

Time: 2 hours

Max. Marks: 60

**PART – A**

Answer *all* questions.

Each question carries Two mark.

Ceiling -20 Marks

1. What is Thyristor?
2. Draw the circuit diagram for single phase half wave rectifier.
3. Define Avalanche Breakdown.
4. Draw the basic structure of p-channel MOSFET.
5. Draw the circuit diagram for step up chopper.
6. Derive equation for duty ratio in Buck converter.
7. Explain the uses of moderator and controlling rods in nuclear power station.
8. What is proximity effect?
9. Define following terms.
  - a. Diversity factor.
  - b. Utilization factor.
10. What is relay? Explain its operation.
11. What is balanced type relay?
12. Explain lightning.

**PART – B**

Answer *all* questions.

Each question carries Five marks.

Ceiling -30 Marks

13. Draw the V-I characteristics of Thyristor and define Holding current, latching current.
14. With a neat diagram explain the working of single phase bridge inverter with R load.
15. What are the control strategies of a chopper circuit?

16. The maximum demand of a power plant is 40MW. The capacity factor is 0.5 and utilization factor is 0.8. Find
- Load factor
  - Plant capacity
  - Reserve capacity.
17. What are the factors affecting corona.
18. Explain wattmeter type induction disc relay.
19. What are the classifications of different type faults present in power station?

**PART - C**

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

20. With a neat diagram explain working of single phase AC Voltage controller with R load.  
Draw output wave form for  $V_s$ ,  $I_{g1}$ ,  $I_{g2}$ ,  $V_o$ ,  $I_o$ ,  $I_s$
21. Draw the schematic diagram and explain hydroelectric power plant.

**1 x 10 = 10 Marks**



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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BVOC AUTO Degree Examination, November 2022

SDC3AU13 – Automotive Electrical and Electronic Systems

(2019 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 cold proof test?
2. Explain shock test.
3. What could be the possible causes for low state of charge fault?
4. Draw starter system general layout.
5. What are the requirements of starting an internal combustion engine?
6. Explain about minimum starting speed of starting motor.
7. Give a few examples of intermittent electrical load of the circuit.
8. Write three types of alternator based on their application.
9. Write three common fault of charging system malfunction.
10. Define OBD-I.
11. Explain the function of EUC
12. Explain trafficators.
13. Define the term continuity checking.
14. How do we troubleshoot capacitor with a multimeter?
15. What could be the possible causes for low capacity battery fault?

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

16. Explain the requirements of vehicle battery.
17. Write note on jump starting.
18. Explain pre-engaged starter.
19. What are the losses in DC Generator?
20. With the help of neat diagram, explain salient pole alternator.
21. Explain EGR.
22. List down the dash based instrument used in modern automobiles.
23. Explain charging system maintenance.

**PART - C**  
**Answer any *two* questions.**  
**Each question carries Ten marks.**

24. Explain starter maintenance and describe the tests that can be done on starting motors.
25. Why we are using rectifiers in automotive alternator. Explain with a neat diagram.
26. Write an essay on EMI and EMC.
27. Explain testing methods for checking electrical components using multimeter.

**2 x 10 = 20 Marks**



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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BVOC AUTO Degree Examination, November 2022

SDC3AU14 – Electrical Machines and Machine Drives

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

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

1. State the principle of operation of Transformer.
2. A 1100/400V, 50HZ Single phase transformer has 100 turns on the secondary winding. Calculate the number of turns on its primary side.
3. What are instrument transformers? Give examples.
4. What is Back emf in DC motor? Explain its significance in DC motor?
5. Enumerate the factors in which the speed of DC motor depends.
6. What is the need for starters in DC motor?
7. What are the two classification synchronous machine rotors?
8. What is the equation of synchronous speed in AC machines? Explain the terms.
9. Define slip and slip Frequency of an induction motor.
10. Compare slip ring rotor and cage rotor of an induction motor.
11. Why single phase induction motor is not self starting?
12. What is stepper motor?
13. List out the application of Brushless DC motor.
14. Define electrical drives.
15. What are the factors affecting the choice of the electric drives.

**PART – B**

Answer *all* questions.

Each question carries **Five** marks.

**Ceiling -35 Marks**

16. Derive an emf equation of Transformer.
17. What is commutation in DC generator?
18. Explain the construction and working of Alternator.
19. How the speed of Induction motor is controlled? Explain the methods
20. With diagrams explain the working of shaded pole motor.
21. Explain switched reluctance motor. What are the applications?
22. With Block diagram explain the different components of an electrical drive system.
23. Compare Stator voltage control and Frequency Control of Induction motor drives.

**PART - C**

Answer any *two* questions.

Each question carries **Ten** marks.

24. What is auto transformer? Derive the equation for the saving of Copper in autotransformer compare with two winding transformer.
25. With neat diagrams explain the construction and different components of DC machine.
26. What is parallel operation of Alternators?
27. Discuss the various starting methods of induction motors.

**2 x 10 = 20 Marks**

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BVOC SD Degree Examination, November 2022

SDC3IT12 – Programming in Python

(2019 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 the difference between compiled and interpreted languages?
- 2 What is the purpose of global keyword in Python?
- 3 What is meant by string slicing?
- 4 Why is indentation important in python?
- 5 Write the difference between list and tuple?
- 6 What is the lambda function?
- 7 What is the use of negative indexing in Python?
- 8 Explain the use of an iframe tag.
- 9 How to create a Hyperlink in HTML?
- 10 What is Python validation?
- 11 What are the Numeric Data Types in MySQL?
- 12 How to create a constructor in Python? Give an example.
- 13 Write a Python program that prints multiplication table of a given number.
- 14 How exceptions are handled in Python?
- 15 What are the two types of polymorphism in Python?



**PART – B**

Answer *all* questions.

Each question carries Five marks.

**Ceiling -35 Marks**

- 16 Explain the different operators in python?
- 17 What is a built-in function? Explain any 10 built in functions with examples?
- 18 Write a python program to print Fibonacci series within a limit.
- 19 Write short note on inheritance in python.
- 20 Explain different looping statement in python.
- 21 Write a short note on Python sets?
- 22 Explain various text formatting tags in HTML?
- 23 Write python code to update data in a table.

**PART - C**

Answer any *two* questions.

Each question carries Ten marks.

- 24 What is Python? Explain its features and applications?
- 25 Explain various table tags in HTML with examples.
- 26 What is CGI? Explain the architecture of CGI.
- 27 Explain different object oriented concepts in python.

**2 x 10 = 20 Marks**

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BVOC SD Degree Examination, November 2022

SDC3IT13.- Computer Networking Concepts

(2019 Admission onwards)

Time: 2 hours

Max. Marks: 60

**PART - A**

**Answer *all* questions.**

**Each question carries Two mark.**

**Ceiling -25 Marks**

1. Explain different use of UDP protocol.
2. What are the function of FDMA and TDMA ?
3. Compare ARP and RARP.
4. Explain cryptography in details.
5. Explain the advantage of Bus topology.
6. Explain ALOHA protocol.
7. Explain ATM.
8. Explain different component of packet switching.
9. In which layer of the TCP/IP protocol suit UDP is located.
10. Explain Digital Signature.
11. Briefly explain Back-off algorithm.
12. What are the characteristics of OSI Model?
13. What is single bit error?
14. What are the different classification of CSMA?
15. Write a short note on Data Link Layer.

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

16. Explain error detecting code CRC with example.
17. Explain simple substitution cipher with example,
18. What are the network topologies? Explain different types of topologies in details.
19. Explain the generation of Cellular networks.
20. Explain the responsibilities of Transport Layer and Network Layer in OSI model.
21. Explain latest technologies in wireless and communication.
22. Explain three ways Handshaking connection establishment in TCP model.
23. Explain two types of sliding window protocol.

**PART - C**  
**Answer any two questions.**  
**Each question carries Ten marks.**

24. Explain layer of OSI model.
25. Explain Link state routing.
26. Explain Distance vector routing
27. Explain Symmetric key algorithm and Asymmetric key algorithm.

**2 x 10 = 20 Marks**