

Total Number of Questions : 28

Time : 2.00 Hours

Max. Marks : 100

1. Critically examine the approach 'one size fits all' does not work in economic planning and development in India. (4 Marks)
2. What is the impact of black money on the Indian economy ? (4 Marks)
3. How do you distinguish between pre-investment and investment phases of the projects ? (4 Marks)
4. Explain the different types of data in research. (4 Marks)
5. What are the major challenges of traditional industries in Kerala ? (4 Marks)
6. Has India witnessed an increase in rural wages in recent times ? Explain. (4 Marks)
7. Discuss the traits of good governance determining effective service delivery. (4 Marks)
8. Distinguish between ecological impact assessment and environmental impact assessment. (4 Marks)
9. Why is Information Technology industry considered important for Kerala's progress ? (4 Marks)
10. Evaluate the accomplishment of sustainable development goals in India. (6 Marks)
11. Explain the various components of inclusive growth in the 12<sup>th</sup> Five Year Plan. (6 Marks)
12. What is the purpose of gender budgeting ? Describe four phases of gender budgeting. (6 Marks)
13. Describe different sampling techniques with examples. (6 Marks)
14. What are the key initiatives are identified for enabling infrastructure in the Kerala Industrial Policy 2023 ? (6 Marks)
15. Give an account of the role and performance of MSMEs (Micro enterprises) in Kerala. (6 Marks)
16. Critically analyse the role of gender audit in workplaces. (6 Marks)
17. Explain the Sen's capability approach to development. (6 Marks)
18. Describe the role of tourism industry in Kerala. List out major agencies in tourism and give a brief account of the trends in tourists arrivals in Kerala. (6 Marks)
19. Mark the following statements as True/False (Answer by writing the statement number followed by true/false) (1 Mark)
  - i) A register is a small, high speed memory which is an integral part of a processor.
  - ii) CE is a certification mark which means a product is in compliance with European Union (EU) standards.
  - iii) Bureau of Energy Efficiency (BEE) is an international program that certifies energy-efficient products.
  - iv) A microprocessor typically comes with a memory unit and number of integrated peripherals for easy interfacing with sensors, actuators and other devices.



20. What does the term "free" in the context "Free Software" refers to? (1 Mark)
21. What does a checkpoint ensure to RDBMS? (1 Mark)
22. Data rate is a major characteristic of a transmission media. What do you mean by data rate and how is it related to the bandwidth of the media? (1 Mark)
23. Match the following devices and its function (Answer by writing the statement no. of the devices with statement number of correct function). (1 Mark)

Devices	Function
a. Router	i. Connects multiple devices, operate at data link layer, intelligent direction of data packets
b. Bridge	ii. Allows digital data to be transmitted over analog lines
c. Switch	iii. Connects multiple networks together and forwards data packets between different networks based on IP address
d. Modem	iv. Connects two LAN together, forward packets based on MAC address

24. Suppose that a company allows its employees to work remotely. The employees need secure access to the company's databases and internal applications to perform the job effectively. Will you suggest VPN as a solution? If so, name two services offered by VPN which are useful in this scenario. (1 Mark)
25. Mark the following statements as true/false (Answer by writing statement number followed by true/false). (1 Mark)
- i) Node.js is a client side Javascript run time environment.
  - ii) XML and JSON are commonly used for data interchange between systems.
  - iii) JSON scripts can be parsed and processed efficiently by Javascript engines.
  - iv) XML uses key value pairs to represent data.
26. Mark the following statements as true/false (Answer by writing statement number followed by true/false). (1 Mark)
- i) Hypervisor is a software or firmware layer that enables virtualization of physical computing resources.
  - ii) Amazon Elastic Compute Cloud (EC2) is a storage service offered by Amazon.
  - iii) Google Kubernetes Engine is a computing service offered by google.
  - iv) Hybrid cloud combine both public and private cloud environments, allowing organizations to get the benefits of both models.
27. Suppose that a machine learning model is developed and trained to detect malware attacks. When the model is tested using 1500 samples, 250 of them are predicted as malwares. Infact, only 200 predictions are correct among the 250 malware predictions. Out of the 1250 samples predicted as benign, there are 30 wrong predictions. Calculate precision and recall of the model. (1 Mark)
28. Name the technology indicated in the following sentences. (1 Mark)
- i) The technology which allows decentralized digital ledger where multiple parties maintains a shared database in secure, transparent and tamper resistant manner.
  - ii) The technology that refers to a network of devices/objects embedded with sensors, softwares and connectivity to collect and exchange data over internet.
  - iii) The open source distributed processing framework that manages storage and data processing of massive data sets and relies on Resilient Distributed Datasets (RDD).
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