



SET



CPE/2021

Computer Science and  
Information Technologyप्रश्न-पुस्तिका क्र.  
Question Booklet No.

1000213

अनुक्रमांक  
Roll No.

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

← परीक्षार्थी अपना अनुक्रमांक दिए गए खानों में लिखें।  
Candidate should write his/her Roll No.  
in the given boxes

मुद्रित पृष्ठों की संख्या/No. of Printed Pages : 32

कुल प्रश्नों की संख्या/Total No. of Questions : 150

समय/Time : 3 घण्टे/Hours

पूर्णांक/Total Marks : 450

## परीक्षार्थियों के लिए निर्देश

1. परीक्षा प्रारम्भ होने के तुरन्त बाद, आप इस प्रश्न-पुस्तिका की पड़ताल अवश्य कर लें, कि इसमें कोई बिना छपा, फटा या छूटा हुआ पृष्ठ अथवा प्रश्नांश, आदि न हो। यदि ऐसा है, तो वीक्षक से तत्काल संपर्क कर प्रश्न-पुस्तिका बदल लेवें।
2. यह प्रश्न-पुस्तिका सम्मिलित रूप से दो खण्डों में विभाजित है। खण्ड – 'अ' तथा खण्ड – 'ब'।
3. खण्ड – 'अ' सामान्य अध्ययन से संबंधित है, जिसमें कुल 50 प्रश्न हैं। सभी प्रश्न हिन्दी तथा अंग्रेजी भाषा में हैं। सभी प्रश्न अनिवार्य हैं।
4. खण्ड – 'ब' संबंधित कम्प्यूटर विज्ञान एवं सूचना प्रौद्योगिकी विषय से है, जिसमें कुल 100 प्रश्न हैं। सभी प्रश्न केवल अंग्रेजी भाषा में हैं। सभी प्रश्न अनिवार्य हैं।
5. सभी प्रश्नों के अंक समान हैं। प्रत्येक सही उत्तर के लिए 03 अंक प्रदान किए जाएंगे। ऋणात्मक मूल्यांकन का प्रावधान है। प्रत्येक गलत उत्तर के लिए 01 अंक काटा जाएगा।
6. प्रदत्त उत्तर-पत्र (ओ.एम.आर. शीट) पर दिए गए निर्देशों को ध्यानपूर्वक पढ़ें तथा अपने उत्तर तदनुसार अंकित करें।
7. कृपया उत्तर-पत्र (ओ.एम.आर. शीट) पर निर्धारित स्थानों पर आवश्यक प्रविष्टियाँ करें, अन्यत्र स्थानों पर नहीं।
8. परीक्षार्थी सभी रफ कार्य प्रश्न-पुस्तिका के अंतिम पृष्ठों पर निर्धारित स्थान पर ही करें, अन्यत्र कहीं नहीं तथा उत्तर-पत्र (ओ.एम.आर. शीट) पर भी नहीं।
9. यदि खण्ड – 'अ' के किसी प्रश्न में किसी प्रकार की कोई मुद्रण या तथ्यात्मक प्रकार की त्रुटि हो, तो प्रश्न के हिन्दी तथा अंग्रेजी रूपांतरों में से हिन्दी रूपांतर को मानक माना जाएगा।

## INSTRUCTIONS TO THE CANDIDATES

1. Immediately after the commencement of the examination, you should check that this Question Booklet does not have any unprinted or torn or missing pages or items etc. If so, immediately contact the Invigilator and get it replaced with another Question Booklet.
2. This combined Question Booklet is divided in two Sections. Section – 'A' and Section – 'B'.
3. Section – 'A' contains 50 questions of General Studies. All questions are in Hindi and English language. All questions are compulsory.
4. Section – 'B' contains 100 questions of concerned Computer Science and Information Technology subject. All questions are in English language only. All questions are compulsory.
5. All questions carry equal marks. Three marks will be given for each correct answer. There is a provision of Negative Marking. For each wrong answer, one mark will be deducted.
6. Read carefully the instructions given on the Answer Sheet (OMR) supplied and indicate your answers accordingly.
7. Kindly make necessary entries on the Answer Sheet (OMR) at the places indicated and nowhere else.
8. Examinee should do all rough work in the space meant for rough work on pages given at the end of the Questions Booklet and nowhere else, not even on the Answer Sheet (OMR).
9. If there is any sort of mistake either of printing or of factual nature in any question of Section – 'A', then out of the Hindi and English versions of the question, the Hindi version will be treated as standard.



खण्ड – 'अ'  
सामान्य अध्ययन

1. निम्नलिखित में से कौन सा कथन मध्यप्रदेश के राज्यपालों के बारे में सत्य नहीं है ?  
(A) प्रथम महिला राज्यपाल – सरला ग्रेवाल  
(B) सबसे अधिक समय तक सेवारत राज्यपाल – एच.वी. पटास्कर  
(C) एकमात्र राज्यपाल जिनका मध्यप्रदेश में ही जन्म हुआ – लालजी टंडन  
(D) मध्यप्रदेश में राष्ट्रपति शासन लागू करने वाले प्रथम राज्यपाल – सत्यनारायण सिन्हा
2. मध्यप्रदेश की वर्तमान विधानसभा में कितनी महिला विधायक हैं ?  
(A) 20  
(B) 21  
(C) 22  
(D) 19
3. मध्यप्रदेश पंचायती राज एवं ग्राम स्वराज अधिनियम, 1993 कब लागू हुआ ?  
(A) 26 जनवरी, 1994  
(B) 25 जनवरी, 1993  
(C) 26 जनवरी, 1993  
(D) 25 जनवरी, 1994
4. सिद्धेश्वर बाणगंगा मेला मध्यप्रदेश के किस शहर में आयोजित होता है ?  
(A) शिवपुरी  
(B) धरमपुरी  
(C) अनूपपुर  
(D) सागर
5. वर्ष 2022 में मध्यप्रदेश राज्य स्तरीय आदिवासी गौरव दिवस किस स्थान पर मनाया गया ?  
(A) भोपाल  
(B) इंदौर  
(C) झाबुआ  
(D) शहडोल
6. 2011 की जनगणना के अनुसार मध्यप्रदेश के बालाघाट जिले का लिंग-अनुपात क्या है ?  
(A) 1002  
(B) 1011  
(C) 1021  
(D) 1031
7. सेंटर फॉर मॉनिटरिंग इंडियन इकोनॉमी (CMIE) के अनुसार अक्टूबर 2022 में मध्यप्रदेश में बेरोजगारी दर कितने प्रतिशत थी ?  
(A) 0.18 प्रतिशत  
(B) 0.8 प्रतिशत  
(C) 1.8 प्रतिशत  
(D) 2.08 प्रतिशत



**SECTION – ‘A’**  
**General Studies**

1. Which of the following facts is not true about Governors of Madhya Pradesh ?  
(A) First female Governor – Sarla Grewal  
(B) Largest serving full time Governor – H.V. Pataskar  
(C) Only Governor who born in Madhya Pradesh – Lal Ji Tandon  
(D) First Governor to impose President's rule in Madhya Pradesh – Satyanarayan Sinha
2. How many female members of Legislative Assembly are there in current Vidhan Sabha of Madhya Pradesh ?  
(A) 20  
(B) 21  
(C) 22  
(D) 19
3. When was Madhya Pradesh Panchayati Raj avam Gram Swaraj Adhiniyam, 1993 implemented ?  
(A) 26<sup>th</sup> January, 1994  
(B) 25<sup>th</sup> January, 1993  
(C) 26<sup>th</sup> January, 1993  
(D) 25<sup>th</sup> January, 1994
4. Which city of Madhya Pradesh organised Siddheswar – Banganga (MELA) fair ?  
(A) Shivpuri  
(B) Dharampuri  
(C) Anup-pur  
(D) Sagar
5. In the year 2022 Madhya Pradesh State level Tribal Pride Day was celebrated at which place ?  
(A) Bhopal  
(B) Indore  
(C) Jhabua  
(D) Shahdol
6. According to 2011 Census, what is the sex-ratio of Balaghat district in Madhya Pradesh ?  
(A) 1002  
(B) 1011  
(C) 1021  
(D) 1031
7. As per the data of Centre for Monitoring Indian Economy (CMIE) in October 2022, what was the unemployment rate in Madhya Pradesh ?  
(A) 0.18 percent  
(B) 0.8 percent  
(C) 1.8 percent  
(D) 2.08 percent



8. मध्यप्रदेश में मुख्यमंत्री उद्यम क्रान्ति योजना किस वर्ष में लागू की गई ?  
(A) 2019  
(B) 2020  
(C) 2021  
(D) 2022
9. भारत की कुल जैविक खेती में मध्यप्रदेश का योगदान कितना है ?  
(A) 50% (प्रतिशत) से अधिक  
(B) 45% (प्रतिशत) से अधिक  
(C) 40% (प्रतिशत) से अधिक  
(D) 48% (प्रतिशत) से अधिक
10. जलवायु की विविधता के आधार पर मध्यप्रदेश राज्य को कितने जलवायु क्षेत्रों एवं फसल क्षेत्रों में बाँटा गया है ?  
(A) 11 जलवायु क्षेत्र एवं 5 फसल क्षेत्र  
(B) 7 जलवायु क्षेत्र एवं 4 फसल क्षेत्र  
(C) 10 जलवायु क्षेत्र एवं 5 फसल क्षेत्र  
(D) 11 जलवायु क्षेत्र एवं 7 फसल क्षेत्र
11. ग्लासगो में आयोजित संयुक्त राष्ट्र जलवायु शिखर सम्मेलन में किस गैस के उत्सर्जन को कम करने पर सहमति बनी ?  
(A) कार्बन मोनोक्साइड  
(B) सल्फर डाई ऑक्साइड  
(C) कार्बन डाई ऑक्साइड  
(D) मीथेन गैस
12. इसरो का कौन सा मिशन विफल हुआ ?  
(A) पी.एस.एल.वी. - सी 34  
(B) एस.एस.एल.वी.डी. - 1  
(C) जी.एस.एल.वी.एम.के. 3  
(D) आई.आर.एन.एस.एस. - 1 E
13. मौलाना अबुल कलाम आज़ाद ट्रॉफी प्रदान की जाती है -  
(A) शिक्षा मंत्रालय द्वारा  
(B) पर्यटन मंत्रालय द्वारा  
(C) खेल मंत्रालय द्वारा  
(D) अल्पसंख्यक कार्य मंत्रालय द्वारा
14. राष्ट्रीय खेल प्रोत्साहन पुरस्कार किस वर्ष में आरम्भ किया गया ?  
(A) 2016  
(B) 2014  
(C) 2009  
(D) 2007
15. आहार अनुदान योजना मध्यप्रदेश शासन के किस विभाग द्वारा संचालित की जाती है ?  
(A) जनजातीय कार्य विभाग  
(B) पंचायत एवं ग्रामीण विकास विभाग  
(C) महिला एवं बाल विकास विभाग  
(D) सहकारिता विभाग



8. In which year Chief Minister Udhya Kranti Yojana have been implemented in Madhya Pradesh ?  
(A) 2019  
(B) 2020  
(C) 2021  
(D) 2022
9. How much is the contribution of Madhya Pradesh to India's total organic farming ?  
(A) More than 50% (percent)  
(B) More than 45% (percent)  
(C) More than 40% (percent)  
(D) More than 48% (percent)
10. On the basis of diversity of climate Madhya Pradesh State has been divided in how many climate zones and crop areas ?  
(A) 11 Climate Zones and 5 Crop Areas  
(B) 7 Climate Zones and 4 Crop Areas  
(C) 10 Climate Zones and 5 Crop Areas  
(D) 11 Climate Zones and 7 Crop Areas
11. At the United Nations Climate Summit held in Glasgow, it was agreed to reduce the emission of which gas ?  
(A) Carbon Monoxide  
(B) Sulphur Dioxide  
(C) Carbon Dioxide  
(D) Methane Gas
12. Which mission of ISRO failed ?  
(A) PSLV - C 34  
(B) SSLVD - 1  
(C) GSLVMK 3  
(D) IRNSS - 1 E
13. Maulana Abul Kalam Azad Trophy is awarded  
(A) By the Ministry of Education  
(B) By the Ministry of Tourism  
(C) By the Ministry of Sports  
(D) By the Ministry of Minority Affairs
14. Rashtriya Khel Protsahan Puraskar was started in which year ?  
(A) 2016  
(B) 2014  
(C) 2009  
(D) 2007
15. Aahaar Anudaan Yojana is run by which department of Madhya Pradesh Government ?  
(A) Tribal Affairs Department  
(B) Panchayat and Rural Development Department  
(C) Women and Child Development Department  
(D) Co-operative Department



16. मध्यप्रदेश राजस्व विभाग द्वारा कौन सी योजना चलाई जा रही है ?  
 (A) मुख्यमंत्री लाडली लक्ष्मी योजना  
 (B) मुख्यमंत्री किसान कल्याण योजना  
 (C) मुख्यमंत्री उद्यम क्रांति योजना  
 (D) मुख्यमंत्री कन्या अभिभावक पेंशन योजना
17. अंतर्राष्ट्रीय ख्याति प्राप्त आयरन नेल आर्टिस्ट कौन हैं ?  
 (A) महमूद अली  
 (B) हाफिज़ मोहम्मद खान  
 (C) वाज़िद खान  
 (D) सुबन्धु दुबे
18. सोनागिरि स्थित है—  
 (A) उमरिया  
 (B) दमोह  
 (C) दतिया  
 (D) सतना
19. सरू मरू की गुफाएँ मध्यप्रदेश के किस जिले में स्थित हैं ?  
 (A) सीहोर  
 (B) उज्जैन  
 (C) मन्दसौर  
 (D) विदिशा
20. पन्ना स्थित कौन सा मंदिर रोमन वास्तुकला से प्रेरित है ?  
 (A) जुगल किशोर मंदिर  
 (B) श्री प्राणनाथ जी मंदिर  
 (C) बलदेव जी मंदिर  
 (D) गंगा झिरिया मंदिर
21. \_\_\_\_\_ एक बहुत बड़ी समस्या है जब कोई ग्राहक ऑनलाइन खरीददारी करता है।  
 (A) खरीदे जा रहे उत्पाद की सुरक्षा  
 (B) ग्राहक के लेनदेन की सुरक्षा  
 (C) खरीदे जा रहे उत्पाद की बिक्री के बाद की सेवा  
 (D) खरीदे जा रहे उत्पाद की गुणवत्ता
22. सरकार की “Centralised Public Grievance Redress & Monitoring System” द्वारा शिकायत निवारण के लिए किन मुद्दों को नहीं लिया जाता है ?  
 (A) RTI संबंधित मामले  
 (B) बैंकिंग प्रणाली से संबंधित वित्तीय सेवाएँ  
 (C) केंद्रीय बोर्ड एवं प्रत्यक्ष करों के मुद्दे  
 (D) बीमा प्रभाग से संबंधित वित्तीय सेवाएँ
23. सुरक्षा के लिये उपयोग किये जाने वाले शब्द हनी-पोट्स का क्या मतलब है ?  
 (A) यह घुसपैठिये के लिये वेबसाइट द्वारा प्रदान की जाने वाली सेवाओं तक सीधी पहुँच है।  
 (B) यह घुसपैठिये के लिये वेबसाइट द्वारा प्रदान की जाने वाली सेवाओं तक अप्रत्यक्ष पहुँच है।  
 (C) इसका उपयोग घुसपैठिये को पकड़ने के इरादे से घुसपैठिये को आकर्षित करने के लिये किया जाता है।  
 (D) इसका उपयोग घुसपैठिये को प्रतियोगी की वेबसाइट पर डायवर्ट (स्थानान्तरित) करने के लिये किया जाता है।



16. Which scheme is being run by Madhya Pradesh Revenue Department ?  
(A) Chief Minister Ladli Laxmi Yojana  
(B) Chief Minister Farmers Welfare Scheme  
(C) Chief Minister Udhya Kranti Yojana  
(D) Chief Minister Girl Guardian Pension Scheme
17. Who is the Internationally renowned Iron Nail Artist ?  
(A) Mahmood Ali  
(B) Hafiz Mohammad Khan  
(C) Wajid Khan  
(D) Subandhu Dubey
18. Sonagiri is located at  
(A) Umaria  
(B) Damoh  
(C) Datia  
(D) Satna
19. Saru Maru Caves are located in which district of Madhya Pradesh ?  
(A) Sehore  
(B) Ujjain  
(C) Mandasaur  
(D) Vidisha
20. Which temple at Panna is inspired by Roman Architecture ?  
(A) Jugal Kishore Temple  
(B) Shri Prannath Ji Temple  
(C) Baldev Ji Temple  
(D) Ganga Jhiriya Temple
21. \_\_\_\_\_ is a major issue while buying online.  
(A) Security of a product being purchased  
(B) Security of customer's transaction  
(C) Sale service after product purchased  
(D) Quality of the product being purchased
22. Which issue is not be taken up for grievance redressal by "Centralised Public Grievance Redress & Monitoring System" of the government ?  
(A) Issues related to RTI matters  
(B) Financial Services related to banking system  
(C) Issue of Central Board and Direct Taxes  
(D) Financial Services related to Insurance Division
23. What do you mean by Honey-pots used for security ?  
(A) It is direct access to services provided by the website for intruder.  
(B) It is indirect access to services provided by the website for the intruder.  
(C) It is used to attract intruder with intention to catch the intruder.  
(D) It is used to divert intruder to competitor's website.



24. आर्टिफिशियल इंटेलीजेन्स में कौन सी खोज तकनीक अनौपचारिक खोज डोमेन के अन्तर्गत आती है ?
- (A) ब्रांच एवं बाउंड खोज  
(B) बेस्ट फर्स्ट खोज  
(C) ओप्टिमल खोज एवं A\*  
(D) यूनिफॉर्मड कास्ट खोज
25. \_\_\_\_\_ की आवश्यकता होती है सुपरवाइज्ड लर्निंग में।
- (A) प्रारंभिक प्रशिक्षण  
(B) प्रारंभिक परीक्षण  
(C) न प्रारंभिक परीक्षण और न ही प्रारंभिक प्रशिक्षण  
(D) प्रारंभिक प्रशिक्षण और प्रारंभिक परीक्षण दोनों
26. कम्प्यूटर नेटवर्क में RPC से आपका क्या मतलब है ?
- (A) रिमोट प्रोसिजरल कॉल  
(B) रिमोट प्रोग्राम कॉल  
(C) रिमोट प्रोटोकॉल कॉल  
(D) रिमोट प्राइवसी कॉल
27. कौन सा लॉजिकल गेट यूनिवर्सल गेट है ?
- (A) OR  
(B) NOT  
(C) NAND  
(D) AND
28. SCARA परिवर्णी शब्द का क्या अर्थ है ?
- (A) Selective Compliance Articulation Robot Arm  
(B) Selective Compliance Assembly Robot Arm  
(C) Special Compliance Assembly Robot Arm  
(D) Special Compliance Articulation Robot Arm
29. सूचनाओं के आदान-प्रदान की full-duplex मोड से आप क्या समझते हैं ?
- (A) सेंडर, रिसीवर को सन्देश भेज सकता है, लेकिन रिसीवर सेंडर को सन्देश नहीं भेज सकता।  
(B) सेंडर, रिसीवर को संदेश भेज सकता है और रिसीवर सेंडर को संदेश भेज सकता है, लेकिन एक साथ नहीं।  
(C) एक साथ सेंडर, रिसीवर को संदेश भेज सकता है और रिसीवर सेंडर को संदेश भेज सकता है।  
(D) न तो सेंडर और न ही रिसीवर एक-दूसरे के साथ सूचनाओं का आदान-प्रदान कर सकते हैं।
30. कौन सा संचार माध्यम लेजर लाइट को सूचना के स्रोत के रूप में ले जा सकता है ?
- (A) फाइबर ओप्टिक  
(B) ट्विस्टेड पेयर केबल  
(C) इलेक्ट्रो-मैग्नेटिक वेक्स  
(D) कोएक्सियल केबल





24. Which Search Technique of AI, comes in the category of Informal search domain ?
- (A) Branch and Bound Search
  - (B) Best First Search
  - (C) Optimal Search & A\*
  - (D) Uniformed Cast Search
25. \_\_\_\_\_ is required in supervised learning.
- (A) Initial Training
  - (B) Initial Testing
  - (C) Neither Initial Training nor Initial Testing
  - (D) Both Initial Training & Testing
26. What is the full form of RPC in computer networks ?
- (A) Remote Procedural Call
  - (B) Remote Program Call
  - (C) Remote Protocol Call
  - (D) Remote Privacy Call
27. Which logical gate is universal gate ?
- (A) OR
  - (B) NOT
  - (C) NAND
  - (D) AND
28. What is the acronym of SCARA ?
- (A) Selective Compliance Articulation Robot Arm
  - (B) Selective Compliance Assembly Robot Arm
  - (C) Special Compliance Assembly Robot Arm
  - (D) Special Compliance Articulation Robot Arm
29. What do you mean by full-duplex mode ?
- (A) Sender can send message to receiver but receiver can't send message to sender.
  - (B) Sender can message to receiver and receiver can send message to sender, but not simultaneously.
  - (C) Sender can send message to receiver and receiver can send message to sender simultaneously.
  - (D) Neither sender nor receiver can exchange information with each other.
30. Which communication medium carry laser light as source of information ?
- (A) Fiber Optics
  - (B) Twisted Pair Cable
  - (C) Electromagnetic Waves
  - (D) Coaxial Cable



31. छिन्दवाड़ा जिले के पातालकोट की भारिया जनजाति के कृषि देवता कौन हैं ?  
(A) डोंगरदेव  
(B) भीमसेन  
(C) भागदेव  
(D) कुडोपन
32. गोंड जाति अपने आपको क्या मानती है ?  
(A) कोयतोर  
(B) जनजाति  
(C) पिछड़ा वर्ग  
(D) आदिवासी
33. निम्नलिखित में से किसकी स्मृति स्वरूप मार्च 20, 1988 को डाक-टिकट जारी किया गया ?  
(A) दुर्गावती  
(B) अहिल्याबाई  
(C) अवन्तीबाई  
(D) लक्ष्मीबाई
34. बुंदेलखंड का 'आल्हाखंड' काव्य किस सुप्रसिद्ध लेखक की रचना है ?  
(A) जगनिक  
(B) सूरदास  
(C) चंदबरदायी  
(D) इनमें से कोई नहीं
35. निम्न में से किस वर्ष 'प्रजामंडल' के चुनाव सम्पन्न हुए ?  
(A) 1936  
(B) 1937  
(C) 1938  
(D) 1939
36. निम्न में से कालिदास की किस रचना का अंग्रेजी भाषा में अनुवाद हुआ ?  
(A) कुमारसंभव  
(B) मेघदूत  
(C) रघुवंशम  
(D) अभिज्ञानशाकुंतलम
37. सन् 1854 में रीवा राज्य के राजा का नाम बताइये ।  
(A) रघुवीरसिंह  
(B) रघुनाथसिंह  
(C) रघुदयालसिंह  
(D) रघुराजसिंह
38. डॉ. भीमराव अंबेडकर ने 1946 में निम्न में से किस नाम से विद्यालय प्रारम्भ किया था ?  
(A) महानाम  
(B) आनंद  
(C) वर्द्धमान  
(D) सिद्धार्थ
39. कलचुरि राजाओं में से सर्वप्रथम सिक्के चलाने का श्रेय निम्न में से किसे प्राप्त है ?  
(A) पृथ्वीदेव  
(B) गांगेयदेव  
(C) जाजल्यदेव  
(D) रतनदेव
40. 'माच परम्परा' का संबंध निम्न में से किससे है ?  
(A) लोकगायन  
(B) लोकगीत  
(C) लोकनाट्य  
(D) लोकनृत्य



31. Who is the farmer God of Bhariya Tribes of Patalkot in Chhindwara District ?  
(A) Dongardeo  
(B) Bhimsen  
(C) Bhagedeo  
(D) Kudopan
32. The Gond caste assumes itself which of the following ?  
(A) Koytor  
(B) Janjati  
(C) Backward Class  
(D) Adiwasi
33. In whose memory of the following the Postal stamp set-up on March 20<sup>th</sup>, year 1988 ?  
(A) Durgawati  
(B) Ahilyabai  
(C) Awantibai  
(D) Laxmibai
34. Who wrote the famous book Bundelkhand's 'Alhakhand' Kavya ?  
(A) Jagnik  
(B) Surdas  
(C) Chandbardai  
(D) None of these
35. In which of the following year the Elections of 'Praja Mandal' was conducted ?  
(A) 1936  
(B) 1937  
(C) 1938  
(D) 1939
36. Which of the following composition of Kalidas translated into English ?  
(A) Kumar Sambhav  
(B) Meghdoot  
(C) Raghuvansham  
(D) Abhigyan Shakuntalam
37. In the year 1854 who was the King of Rewa ?  
(A) Raghuvir Singh  
(B) Raghunath Singh  
(C) Raghudayal Singh  
(D) Raghuraj Singh
38. Dr. Bhimrao Ambedkar started a school on whose name in the year 1946 ?  
(A) Mahanam  
(B) Anand  
(C) Vardhman  
(D) Siddhartha
39. To whom the credit is given to start up coins the foremost among the following Kalchuri Kings ?  
(A) Prithavideo  
(B) Gangeydeo  
(C) Jajalyadeo  
(D) Ratandeo
40. By whom 'the Mach Parampara' is related ?  
(A) Folk singing  
(B) Folk song  
(C) Folk drama  
(D) Folk dance



41. वह भाग जो भाण्डेर पठार, कैमूर की पहाड़ियों तथा अन्य पहाड़ियों का समूह है, कहलाता है –  
(A) महादेव श्रेणी  
(B) मैकाल श्रेणी  
(C) विंध्यन कगार  
(D) बुंदेलखण्ड पठार
42. राजपीपला की पहाड़ियाँ किस पर्वत शृंखला का भाग हैं ?  
(A) विंध्यन कगार  
(B) कैमूर श्रेणी  
(C) विंध्यन श्रेणी  
(D) सतपुड़ा श्रेणी
43. मध्यप्रदेश का सर्वाधिक वर्षा वाला क्षेत्र है –  
(A) मालवा का पठार  
(B) बघेलखण्ड पठार  
(C) महादेव श्रेणी  
(D) नर्मदा घाटी
44. निम्न में से किस जिले से कर्क रेखा नहीं गुजरती है ?  
(A) शहडोल  
(B) रायसेन  
(C) सीहोर  
(D) शाजापुर
45. बुढ़ार क्षेत्र प्रसिद्ध है –  
(A) मैंगनीज उत्पादन  
(B) कोयला उत्पादन  
(C) अभ्रक उत्पादन  
(D) जलविद्युत उत्पादन
46. अमरकंटक ताप विद्युत केन्द्र स्थापित किया गया है –  
(A) सारणी  
(B) चचाई  
(C) बिरसिंहपुर  
(D) डोंगलिया
47. निम्न में से कौन सी एक परियोजना मध्यप्रदेश एवं उत्तरप्रदेश की संयुक्त परियोजना है ?  
(A) माताटीला बाँध परियोजना  
(B) सिन्ध परियोजना  
(C) तवा परियोजना  
(D) बारना परियोजना
48. रानी अवन्तीबाई सागर परियोजना निम्न में से किस जिले में स्थित है ?  
(A) होशंगाबाद  
(B) नरसिंहपुर  
(C) रायसेन  
(D) जबलपुर
49. पन्ना राष्ट्रीय उद्यान में मगर/घड़ियाल पालन निम्न में से एक नदी के कारण है :  
(A) बेतवा  
(B) सोन  
(C) टोंस  
(D) केन
50. मध्यप्रदेश ऊर्जा विकास निगम की स्थापना कब हुई ?  
(A) 1982  
(B) 1985  
(C) 1989  
(D) 1990



41. The division which is group of Bhandar Plateau, Kaimur Hills and other hills, known as –  
(A) Mahadev Range  
(B) Maikal Range  
(C) Vindhyan Escarpment  
(D) Bundelkhand Plateau
42. Rajpipla hills are part of which mountain range ?  
(A) Vindhyan Escarpment  
(B) Kaimur Range  
(C) Vindhyan Range  
(D) Satpura Range
43. The area, received maximum rainfall in Madhya Pradesh is –  
(A) Malwa Plateau  
(B) Baghelkhand Plateau  
(C) Mahadev Range  
(D) Narmada Valley
44. From which one of the following districts, tropic of cancer does not pass ?  
(A) Shahdol  
(B) Raisen  
(C) Sehore  
(D) Shajapur
45. Budhar area is famous for  
(A) Manganese Production  
(B) Coal Production  
(C) Mica Production  
(D) Hydroelectricity Production
46. Amarkantak Thermal Power Station is established in  
(A) Sarani  
(B) Chachai  
(C) Birsinghpur  
(D) Dongalia
47. Which one of the following projects is a joint project of Madhya Pradesh and Uttar Pradesh ?  
(A) Matateela Project  
(B) Sindh Project  
(C) Tawa Project  
(D) Barna Project
48. Rani Avantibai Sagar Project is located in which of the following districts ?  
(A) Hoshangabad  
(B) Narsinghpur  
(C) Raisen  
(D) Jabalpur
49. Crocodile/Alligator rearing in Panna National Park is due to one of the following rivers :  
(A) Betwa  
(B) Son  
(C) Tons  
(D) Ken
50. When was Madhya Pradesh Energy Development Corporation established ?  
(A) 1982  
(B) 1985  
(C) 1989  
(D) 1990



खण्ड - 'ब' / SECTION - 'B'  
कम्प्यूटर विज्ञान एवं सूचना प्रौद्योगिकी /

Computer Science and Information Technology

51. What is the difference between an abstract and an interface in Java ?

- (A) An abstract class can have constructor(s), while an interface cannot.
- (B) An abstract class can have non-abstract methods, while interface cannot.
- (C) An abstract class can have multiple inheritance, while an interface cannot.
- (D) All of these

52. Which Java keyword is used to prevent a method or class from being overridden in a subclass ?

- (A) Final
- (B) Static
- (C) Abstract
- (D) Transient

53. Which Java API is used to implement multithreading in Java ?

- (A) Java.lang.Thread
- (B) Java.Util.concurrent
- (C) Java.awt.\*
- (D) Java.io.\*

54. Which pattern will be printed by the following C program ?

```
#include <stdio.h>
int main() {
    int i, j;
    for (i = 1; i <= 5; i++)
    {
        for (j = 1; j <= i; j++)
        {
            print f("%d", j);
        }
        printf("\n");
    }
    return 0;
}
```

- (A) 1  
1 2  
1 2 3  
1 2 3 4  
1 2 3 4 5
- (B) 1  
2 1  
3 2 1  
4 3 2 1  
5 4 3 2 1
- (C) 5  
4 5  
3 4 5  
2 3 4 5  
1 2 3 4 5
- (D) 1 2 3 4 5  
1 2 3 4  
1 2 3  
1 2  
1



55. In operating system, which of the following is / are CPU scheduling algorithms ?
- (A) Priority
  - (B) Round Robin
  - (C) Shortest Job First
  - (D) All of these
56. What are the two atomic operations permissible on semaphores ?
- (A) Wait, Stop
  - (B) Stop, Signal
  - (C) Hold, Wait
  - (D) Wait, Signal
57. Which one of the following is the deadlock avoidance algorithm ?
- (A) Bankers algorithm
  - (B) Round Robin algorithm
  - (C) Elevator algorithm
  - (D) Kam's algorithm
58. The circular wait condition can be prevented by ...
- (A) Defining a linear ordering of resource types
  - (B) using thread
  - (C) using pipes
  - (D) All of these
59. Virtual memory systems uses a technique called
- (A) Fragmentation
  - (B) Paging
  - (C) Mapping
  - (D) None of these
60. To overcome difficulties in Reader-writers problem, which of the following statement is/are true ?
- 1. Writers are given exclusive access to shared objects.
  - 2. Readers are given exclusive access to shared objects.
  - 3. Both readers and writers are given exclusive access to shared objects.
- Choose the correct answer from the code given below :
- (A) 1 only
  - (B) Both 2 and 3
  - (C) 2 only
  - (D) 3 only
61. The paging activity in which a process having less number of frames than required or when a process is executing with a minimum set of frames allocated to it is called as
- (A) Demand, paging
  - (B) FIFO page replacement algorithm
  - (C) Thrashing
  - (D) Optimal page replacement algorithm.



62. Consider the following set of processes, assumed to have arrived at time 0. Consider the CPU Scheduling algorithm Round Robin (RR). For RR, assume the process are scheduled in the order P1, P2, P3 having burst time, 24, 3 and 3 respectively.

If the time quantum for, RR is 4 milli-seconds, then the average waiting time for RR algorithm is

- (A) 5.66
- (B) 5.25
- (C) 5.50
- (D) 5.70

63. Which of the following is NOT true of deadlock prevention and deadlock avoidance scheme ?

- (A) In deadlock prevention, the request for resources is always granted if the resulting state is safe.
- (B) In deadlock avoidance, the request for resources is always granted if the result state is safe.
- (C) Deadlock avoidance is less restrictive than deadlock prevention.
- (D) Deadlock avoidance requires knowledge of resource requirement a priori.

64. Which is used to invoke a loader to load system program and application program into memory at intervals ?

- (A) Assembler
- (B) Control card interpreter
- (C) Cross compiler
- (D) Load and Go

65. When the input array is already completely sorted, the running time of insertion sort and quick sort will be respectively ?

- (A)  $O(n)$  and  $\Theta(n^2)$
- (B)  $O(n^2)$  and  $\theta(n)$
- (C)  $O(n)$  and  $\theta(n)$
- (D)  $\theta(n)$  and  $\theta(n)$

66. Which of the following is the correct solution of the recurrence ?

$$T(n) = T\left(\frac{n}{3}\right) + T\left(\frac{2n}{3}\right) + cn$$

- (A)  $O(\lg n)$
- (B)  $O(n^2 \lg n)$
- (C)  $O(n^2)$
- (D)  $O(n \lg n)$





67. Which of the following statement is correct ?
- (A) Dijkstra's algorithm has lower running time than Bellman-Ford algorithm.
  - (B) Bellman-Ford algorithm has lower running time than Dijkstra's algorithm.
  - (C) Dijkstra's algorithm and Bellman-Ford algorithm have same running time.
  - (D) Running time of Dijkstra's algorithm is  $n$ -times of the running time of Bellman-Ford algorithm.
68. A dynamic programming algorithm solves every sub sub-problem \_\_\_\_.
- (A) twice
  - (B) just once
  - (C)  $n$ -times
  - (D)  $n^2$ -times
69. Which of the following is incorrect ?
- (A)  $f(n) = \theta(g(n))$  iff  $g(n) = \theta(f(n))$
  - (B)  $f(n) = O(g(n))$  iff  $g(n) = \Omega(f(n))$
  - (C)  $f(n) = O(g(n))$  iff  $g(n) = \omega(f(n))$
  - (D)  $f(n) = O(g(n))$  iff  $g(n) = \theta(f(n))$
70. Consider the following instance of the fractional knapsack problem :  
 $n = 3$ ,  $M = 20$ ,  $(p_1, p_2, p_3) = (24, 24, 15)$  and  $(w_1, w_2, w_3) = (18, 15, 10)$ .  
What will be the maximum profit earned ?
- (A) 33
  - (B) 28.2
  - (C) 31.5
  - (D) 32.5
71. Which of the following statement is not correct ?
- (A) The best case computing time of binary search for unsuccessful searches is  $\Theta(1)$ .
  - (B) The average case computing time of binary search for unsuccessful searches is  $\Theta(\log n)$ .
  - (C) The best case computing time of binary search for successful searches is  $\Theta(1)$ .
  - (D) The average case computing time of binary search for successful searches is  $\Theta(\log n)$ .
72. For all  $\alpha \in \mathbb{R}$ , for all  $\beta \in \mathbb{R}$ , if  $\alpha$  and  $\beta$  are constants and  $\alpha < \beta$ , then which of the following is correct ?
- (A)  $2^{\alpha n} \in O(2^{\beta n})$
  - (B)  $2^{\alpha n} \in \omega(2^{\beta n})$
  - (C)  $2^{\alpha n} \in \Omega(2^{\beta n})$
  - (D)  $2^{\alpha n} \in \Theta(2^{\beta n})$



73. What is the minimum number of comparisons in the worst case to merge two sorted arrays, each containing  $k = M = n/2$  entries by comparisons of keys ?

- (A)  $n$
- (B)  $(n + 1)$
- (C)  $(n - 1)$
- (D)  $n^2$

74. What is the least number of comparisons in the worst case to find the median of  $n$ -keys (for odd  $n$ ) by comparisons of keys ?

- (A)  $(n - 1)/2$
- (B)  $3n/2 - 3/2$
- (C)  $(n + 1)/2$
- (D)  $3n - 1$

75. Consider the following NFA :

$(\{p, q, r, s\}, \{0, 1\}, \delta, P, \{S\})$

where  $\delta$  is given below :

|   | 0    | 1 |
|---|------|---|
| p | p, q | p |
| q | r    | r |
| r | s    | — |
| s | s    | s |

How many states will be in an equivalent DFA ?

- (A) 8
- (B) 9
- (C) 6
- (D) 7

76. Deterministic Finite Automata (DFA) for regular expression  $10+(0+11)0^*1$  will contain how many states ?

- (A) 6
- (B) 4
- (C) 3
- (D) 5

77. Which of the following statement is FALSE about Context Free Languages (CFL) ?

- (A) CFL are closed under intersection
- (B) CFL are closed under homomorphism
- (C) CFL are closed under union
- (D) CFL are closed under closure

78. What will be the length of the output string of Moore Machine, if the length of Input string is  $n$  ?

- (A)  $n + 2$
- (B)  $2n + 1$
- (C)  $n + 1$
- (D)  $n$

79. Consider the following language :

$$L(G) = \{a^n b^{2n} \mid n \geq 0\}$$

Any strings generated by  $L(G)$  is accepted by

- (A) a non-determinist finite automata
- (B) Pushdown Automata
- (C) Two-way Finite Automata
- (D) Deterministic Finite Automata



80. Consider the following statements about pumping Lemma

- (a) Pumping lemma is used to show that languages are regular.
- (b) Pumping lemma is used to show that languages are not regular.
- (c) Pumping lemma is used to show that languages are not context free.
- (d) Pumping lemma is used to show that languages are context free.

Which of the following statements are correct ?

- (A) Only (a) is correct
- (B) Only (a) and (d) is correct
- (C) Only (b) and (c) is correct
- (D) Only (d) is correct

81. Which of the following statements are true ?

- (a) Let  $G$  be an unrestricted grammar then the problem of determine whether or not  $L(G) = \phi$  is undecidable.
- (b) Let  $G$  be an unrestricted grammar then the problem of determine whether or not  $L(G) = \phi$  is decidable.
- (c) Let  $M$  be any Turing Machine then the question of whether or not  $L(M)$  is finite is decidable.
- (d) Let  $M$  be any Turing Machine then the question of whether or not  $L(M)$  is finite is undecidable.

- (A) Only (b) is true
- (B) Only (c) is true
- (C) Only (a) and (d) is true
- (D) Only (a) and (c) is true

82. The production of the CFG is as follows :

$$S \rightarrow bb \mid baSa$$

What will be the equivalent GNF (Greibach Normal Form)

- (A)  $S \rightarrow bA \mid bBSB, A \rightarrow b, B \rightarrow a$
- (B)  $S \rightarrow bb \mid bBSB, A \rightarrow a, B \rightarrow b$
- (C)  $S \rightarrow Ab \mid bBSB, A \rightarrow a, B \rightarrow a$
- (D)  $S \rightarrow aa \mid bBSB, A \rightarrow b, B \rightarrow a$

83. Consider the following regular expression

$$(aa)^*(bb)^*b$$

which of the following string is not generated by the given regular expression ?

- (A) aaaabbbb
- (B) aabbbb
- (C) aaaabbbbb
- (D) aaaabbbb

84. Consider languages  $L$  over  $\Sigma$  in list-1 and some decision properties of  $L$  in List-2 for  $L = \Sigma^*$ . Match the correct one :

| List - 1    | List - 2              |
|-------------|-----------------------|
| (Languages) | (Decision Properties) |

- |  |                  |
|--|------------------|
| (a) Regular set                          | (i) Decidable    |
| (b) Deterministic context free languages | (ii) Undecidable |
| (c) Context Free Languages               | (iii) Decidable  |
| (d) Context sensitive languages          | (iv) Undecidable |

Code :

- |     | (a)   | (b)   | (c)   | (d)  |
|-----|-------|-------|-------|------|
| (A) | (i)   | (iii) | (ii)  | (iv) |
| (B) | (i)   | (ii)  | (iii) | (iv) |
| (C) | (iii) | (iv)  | (i)   | (ii) |
| (D) | (iv)  | (iii) | (i)   | (ii) |



85. Which of the following primitive act is used for transfer of physical location of an object ?  
(A) MOVE  
(B) PTRANS  
(C) MTRANS  
(D) PROPEL
86. The beta value represents the \_\_\_\_\_ bound on the value of a \_\_\_\_\_ node.  
(A) upper, maximizing  
(B) lower, maximizing  
(C) upper, minimizing  
(D) lower, minimizing
87. A formula  $\alpha$  is said to be \_\_\_\_\_ if and only if for every interpretation I,  $\alpha$  is true.  
(A) Valid  
(B) Invalid  
(C) Satisfiable  
(D) Unsatisfiable
88. In Bayes theorem, if there are n different propositions being considered, what is the size of joint probabilities that is required to compute the conditional probability of a given hypothesis ?  
(A)  $2n$   
(B)  $n$   
(C)  $n!$   
(D)  $2^n$
89. A search algorithm is \_\_\_\_\_, if for any graph, it always terminates in an optimal path from start state to goal state if path exists.  
(A) Admissible  
(B) Cognitive  
(C) Heuristic  
(D) Optimistic
90. Given following sentences :  
(1) Marcus was a man.  
(2) Marcus was a Pompeian.  
(3) All Pompeians were Romans.  
(4) Caesar was a ruler.  
(5) All Romans were either loyal to Caesar or hated him.  
(6) Everyone is loyal to someone.  
(7) People only try to assassinate rulers they are not loyal to.  
(8) Marcus tried to assassinate Caesar.
- Select the correct clause form for "Everyone is loyal to someone"  
(A) loyal to  $(x, y)$   
(B)  $\forall x : \exists z : \text{loyal to } (x, z)$   
(C) loyal to  $(x, f(x))$   
(D) loyal to  $(x, z)$



91. How can the Bayesian network be used to answer questions that include conjunction of varieties ?
- (A) using full distribution
  - (B) using joint distribution
  - (C) using partial distribution
  - (D) All of these
92. Which is not true about Hebb learning rule ?
- (A) Hebb rule cannot learn when the target is 0.
  - (B) Hebb rule learns better when input and output are in bipolar form.
  - (C) Hebb rule is one of the earliest learning rules for artificial neural network.
  - (D) Hebb rule is also known as perception learning rule.
93. A semantic net is a representation in which
- (A) Lexically, there are nodes, links and application specific link labels
  - (B) Structurally, each link connects a tail node to a head node.
  - (C) Semantically, the nodes and links denote application-specific entities.
  - (D) All of these
94. The process of creation of a formal and manipulable description of a problem from informal one is called \_\_\_\_.
- (A) Formalization
  - (B) Operationalization
  - (C) Manipulization
  - (D) None of these
95. A data model is a collection of conceptual tools for describing \_\_\_\_.
- (A) Data, Data Relationships, Data Abstraction
  - (B) Data, Data Relationships, Data Independence
  - (C) Data, Data Relationships, Data Semantics, Consistency Constraints
  - (D) None of these
96. The attribute types of Entity are generally used in ER model.
- (A) Simple and Composite
  - (B) Single valued and Multi valued
  - (C) Stored and Derived
  - (D) All of these



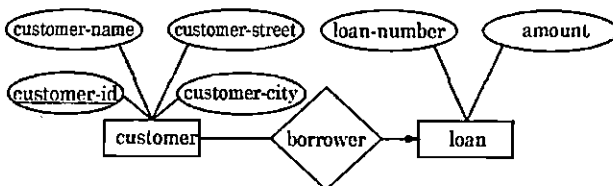
97. The number of entity sets that participate in a relationship set is \_\_\_\_\_.

- (A) Degrees of Relationship set
- (B) Constraint of Relationship set
- (C) Both (A) & (B)
- (D) None of these

98. Multivalued attributes are represented in E-R diagram using

- (A) Double Rectangles
- (B) Dashed Ellipses
- (C) Double Ellipses
- (D) Double Diamonds

99. Relationship set borrower from customer to loan in below diagram is \_\_\_\_\_.



- (A) one to many
- (B) many to one
- (C) one to one
- (D) many to many

100. Abstraction through which relationship are treated as higher level entities is called \_\_\_\_\_.

- (A) Specialization
- (B) Generalization
- (C) Aggregation
- (D) Classification

101. A relation scheme R is in BCNF with respect to a Set F of functional dependencies if, for all functional dependencies in  $F^+$  of the form  $\alpha \rightarrow \beta$ , where  $\alpha \subseteq R$  and  $\beta \subseteq R$  and which of the following hold :

X :  $\alpha \rightarrow \beta$  is a trivial functional dependencies.

Y :  $\alpha$  is a super key for scheme R.

- (A) Only X
- (B) Only Y
- (C) Atleast one from X and Y
- (D) None of these

102. To design a trigger mechanism, we must meet which of the following requirements :

X : Specify when a trigger is to be executed.

Y : Specify the actions to be taken when the trigger executes.

- (A) Only X
- (B) Only Y
- (C) Both X and Y
- (D) None of these



103. Which of the following is Unary operation ?

X : Select

Y : Project

Z : Rename

- (A) Only X
- (B) Only X and Y
- (C) Only X and Z
- (D) All of these

104. Data redundancy leads to which of the following ?

X : Higher storage & access cost

Y : Data inconsistency

- (A) Only X
- (B) Only Y
- (C) Only X and Y
- (D) None of these

105. All browsers that support JavaScript will be able to run \_\_\_\_\_ code.

- (A) Server Side JavaScript
- (B) Client Side JavaScript
- (C) Both (A) and (B)
- (D) None of these

106. When the SYN + ACK segment arrive,  $RTT_D$  is measured and is equal to 2.5 second. The value of  $RTT_D$  and RTO (Retransmission-Time-Out) respectively is \_\_\_\_\_

$RTT_D$  \_\_\_\_\_ & RTO \_\_\_\_\_.

- (A) 0.75, 4.5
- (B) 1.25, 7.5
- (C) 1.25, 4.5
- (D) 2.5, 1.25

107. In OSI Model \_\_\_\_\_ provides reliable, transparent transfer of data between end point, also provide end-to-end error recovery and flow control.

- (A) Data Link Layer
- (B) Network Layer
- (C) Transport Layer
- (D) Session Layer

108. The/In an IPv4 packet, the value of HLEN is  $(1000)_2$ . How many bytes of option are being carried by this packet ?

- (A) 32-bytes
- (B) 20-bytes
- (C) 16-bytes
- (D) 12-bytes



109. Bellman - Ford Equation is used in \_\_\_\_\_ to find the least cost (Shortest distance) between a source node.

- (A) Distance Vector Routing
- (B) Link State Routing
- (C) Hierarchical Routing
- (D) Path Vector Routing

110. The Data speed of Fast Ethernet is \_\_\_\_\_.

- (A) 1 Gbps
- (B) 10 Gbps
- (C) 100 Mbps
- (D) 10 Mbps

111. The Fig. No. 3 is the message format for \_\_\_\_\_.

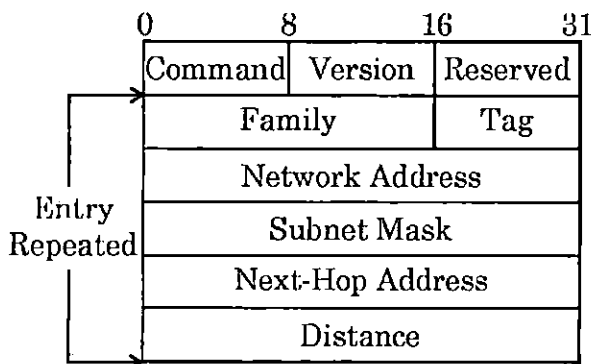


Fig. No. 3

- (A) Routing Information Protocol
- (B) Open-Shortest Path First Protocol
- (C) Internet Group Management Protocol
- (D) Border Gateway Protocol

112. Virtual-circuit approach is the category of \_\_\_\_\_.

- (A) Message Switching
- (B) Packet Switching
- (C) Circuit Switching
- (D) Crossbar Switching

113. XML well-formedness rules for Tags are Uppercase and Lowercase sensitive is correct way of writing \_\_\_\_\_.

- (A) <A> </A>
- (B) <A> <a>
- (C) <a> <a>
- (D) <A>><A>

114. The type of following given destination address is :

FF : FF : FF : FF : FF : FF

- (A) Broadcast Address
- (B) Unicast Address
- (C) Multicast Address
- (D) Geocast Address

115. When updating a picture, the segmentation of display buffer reduces the work load on \_\_\_\_\_.

- (A) Display Controller
- (B) Display Buffer
- (C) Picture Processor
- (D) Digital-to-Analog Convertor





116. To rotate a point in a plane about an arbitrary point, we need to perform.

- (A) Two rotation & one translation
- (B) One translation & one rotation
- (C) Two translation & two rotation
- (D) Two translation & one rotation

117. If homogeneous co-ordinates are used in 3D translation then the size of translation matrix is \_\_\_\_\_.

- (A)  $4 \times 4$
- (B)  $2 \times 3$
- (C)  $3 \times 4$
- (D)  $3 \times 2$

118. In Cohen-Sutherland line clipping algorithm, if the bit by bit logical AND of the two end point codes is not 0000, then the line is \_\_\_\_\_.

- (A) Trivially accepted
- (B) Trivially rejected
- (C) Required to test further for trivial rejection
- (D) Partially visible hence can not be trivially accepted or rejected.

119. Which of the following is not a property of Bezier curve ?

- (A) The degree of polynomial of the curve is one less than the number of defining polygon points.
- (B) The curve exhibits the variation diminishing property.
- (C) The curve oscillates about the sides of defining polygon.
- (D) The curve is invariant under an affine transformation.

120. A program invoked to determine the characteristics of an object in the animation is known as \_\_\_\_\_.

- (A) Accelerator
- (B) Simulator
- (C) Generator
- (D) Actor

121. In a n-bit plane representation of a coloured image, the maximum possible number of colours are given by \_\_\_\_\_ formula.

- (A)  $(n^2)^3$
- (B)  $(2^n)^3$
- (C)  $3^n$
- (D)  $n^2$



122. A rasterized line from (0, 0) to (-8, 4) using DDA algorithm lies to which side of the actual line ?
- (A) One side of the actual line
  - (B) Perpendicular to the actual line.
  - (C) Intersect the actual line.
  - (D) Coincide with the actual line.
123. In order to minimize the computation in the Bresenham's circle drawing algorithm, which of the following symmetry used ?
- (A) 4-symmetry
  - (B) 16-symmetry
  - (C) 8-symmetry
  - (D) 2-symmetry
124. Based on the tristimulus theory of vision, which of the following wavelength respectively for RGB colours represent the peak sensitivity of the three visual pigments in the cones of the retina ?
- (A) 730, 530 & 330
  - (B) 830, 630 & 430
  - (C) 730, 630 & 450
  - (D) 630, 530 & 450
125. A process Model for Software Engineering is based on
- (A) Method and Tools
  - (B) Controls and Deliverables
  - (C) Nature of the project and Application
  - (D) All of these
126. Black box testing attempts to find errors in the following categories –
- (A) Missing errors
  - (B) Interface errors
  - (C) Behaviour errors
  - (D) All of these
127. Boundary Value analysis is a test case design technique that complements :
- (A) Partitioning
  - (B) Equivalence Partitioning
  - (C) Boolean Partitioning
  - (D) None of these
128. Out of the following which is the category for debugging ?
- (A) Smoke testing
  - (B) Unit testing
  - (C) Integration testing
  - (D) Brute force



129. The degree to which the design specifications are followed during manufacturing is called as –
- (A) Quality of Design
  - (B) Quality of Conformance
  - (C) Quality of Control
  - (D) None of these
130. Which of the following are the Project Scheduling Method(s) ?
- (A) PERT
  - (B) CPM
  - (C) Both (A) and (B)
  - (D) None of these
131. Unified Modelling Languages uses
- (A) Object Modelling Language
  - (B) Object Constraint Language
  - (C) Object Oriented Language
  - (D) None of these
132. RMMM plan stands for
- (A) Risk Monitoring, Mitigation and Management
  - (B) Risk Management, Mitigation and Monitoring
  - (C) Risk Mitigation, Monitoring and Management
  - (D) Risk Mitigation, Management and Monitoring
133. The size of the software varies with
- (A) Requirement specifications
  - (B) Business Conditions
  - (C) Constraints
  - (D) All of these
134. A direct outgrowth of modularity and concepts of abstraction and information hiding is called as
- (A) Cohesion
  - (B) Functional Independence
  - (C) Coupling
  - (D) Scalar Item



135. In the context of CPU; ALU stand for  
(A) Arithmetic Local Unit  
(B) Arithmetic Logic Unit  
(C) Algebraic Local Unit  
(D) Algebraic Logic Unit
136. In the memory hierarchy which type of memory having the following features ?  
(i) Smallest capacity  
(ii) Lowest access time  
(iii) Highest cost per bit  
(A) RAM (Random Access Memory)  
(B) Cache memory  
(C) Register  
(D) Magnetic Disk
137. Which one of the following addressing mode is used in a load instruction of the Register transfer form ?  
 $AC \leftarrow M[M[ADR]]$   
(A) Direct Address  
(B) Indirect Address  
(C) Relative Address  
(D) Immediate Address
138. In a vector processing point of view which is not a vector instruction type ?  
(A) Vector-Vector Instruction  
(B) Vector-Scalar Instruction  
(C) Vector-Peripheral Instruction  
(D) Vector-Memory Instruction
139. A \_\_\_\_\_ is issued to activate the peripheral and to inform it what to do.  
(A) Control Command  
(B) Status Command  
(C) Data Output Command  
(D) Data Input Command
140. 'Floating-Gate Metal-Oxide Semiconductor' (FGMOS) transistor is used in \_\_\_\_\_.  
(A) SRAM  
(B) PROM  
(C) EEPROM  
(D) DRAM
141. The PC Keyboard repeatedly sends the scan code of a key if it remains pressed for more than 0.5 seconds. This action is termed as :  
(A) Key bounce  
(B) Typematic  
(C) Make and Code  
(D) None of these
142. What will be the 2's complement of the following decimal number  $(-72)_{10}$  ?  
(A) 10111000  
(B) 11000111  
(C) 00111001  
(D) 11110000



143. A digital computer has a common bus system for 16 registers of 32 bits each. The bus is constructed with multiplexers. How many multiplexers are there in the bus ?  
(A) 16  
(B) 8  
(C) 64  
(D) 32
144. Instruction pipeline follow the sequence in pipelining :  
(A) FO DA FI EX  
(B) FI FO DA EX  
(C) FO FI DA EX  
(D) FI DA FO EX
145. Which control structure is used to execute a block of code a fixed number of times ?  
(A) if-else  
(B) switch  
(C) for  
(D) continue
146. Which of the following statement is true regarding the do-while loop ?  
(A) The loop will be executed only when the condition is true.  
(B) Regardless of the condition loop will be executed at least once.  
(C) The loop will be executed until condition is false.  
(D) The loop will be executed a specific number of times.
147. Which of the following data structures is best suited for searching for an element in a large dataset ?  
(A) Array  
(B) Linked list  
(C) Hash table  
(D) Binary Search Tree
148. Convert the given expression from infix to post fix notation :  
 $((A - (B + C)) * D) \$ (E + F)$   
(A)  $ABC + - D * EF + \$$   
(B)  $ABC - + D \$ EF +$   
(C)  $A - BC + D * EF + \$$   
(D)  $ABC + - D + EF \$$
149. Which of the following statement(s) is/are true for linked list ?  
(A) Linked list are dynamic  
(B) Linked list size is not fixed.  
(C) Linked list requires less space.  
(D) (A) & (B)
150. What is the output of the following program ?  
Class A {  
    int x = 5;  
    void print() {  
        system.out.print(x + "");  
    }  
}  
Class B extends A {  
    int x = 10;  
    void print() {  
        system.out.print(x + "");  
    }  
}  
Public class main() {  
    Public static void main (String[] args) {  
        A obj = new B();  
        obj.print();  
    }  
}
- (A) 5                      (B) 10  
(C) 5 10                  (D) 10 5



कच्चे काम के लिए जगह  
**SPACE FOR ROUGH WORK**



कच्चे काम के लिए जगह  
**SPACE FOR ROUGH WORK**



कच्चे काम के लिए जगह  
**SPACE FOR ROUGH WORK**