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**UT/APMAAK/1223/A 06-NOV-2023**

**UNIT TEST (2023-2024)**

**Answer Key**

|  |  |
| --- | --- |
| **SUBJECT: Applied Mathematics**  **GRADE: XII** | **Maximum Marks: 50****Time Allowed: 2 Hours** |

|  |  |
| --- | --- |
| **Section A**  **Each question carries 1 mark** | |
| **1.** | c) 3/32 |
| **2.** | (b) Rs.96000 |
| **3.** | (d) All of these. |
| **4.** | d) Not defined |
| **5.** | b) 15%p.a |
| **6.** |  |
| **7.** | c)32 |
| **8.** |  |
| **9.** | d)A is false but R is true. |
| **10.** | b)both A and R are true, but R is not the correct explanation of A |
|  | **SECTION B**  **This section comprises of very short answer type-questions (VSA) of 2 marks each** |
| **11.** |  |
| **12** | **OR** |
| **13.** | The population of a town grows at the rate of 10% per year. Using D.E find how long it will take for the population to grow 4 times? |
| **14.** |  |
|  | **SECTION C**  **(This section comprises of short answer type questions (SA) of 3 marks each)** |
| **15** |  |
| **16** | ii) |
| **17** |  |
|  | **Section D**  **Qns. 32 to 35 carries 5 marks.** |
| **18.** | . |
| **19** | 1. Rs.4593 ii) Rs. 233336.89 iii) Rs. 3280.48 Iv) Rs. 151160 |
| **20.** | **Mean=17/34=1/2**  **Variance=25/68**  OR        Variance=8/9 |
|  | **SECTION E-Case based** |
| **21** | The demand function D(x)=4600-30x   1. The supply function S(x)=20x 2. Calculate the equilibrium point (92,1840) 3. The consumer surplus =Rs. 126960   Or  The producer surplus=Rs. 84640 |
| **22** | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Year | 2012 | 2013 | 2014 | 2015 | 2016 | | Productions(tonnes) | 80 | 90 | 92 | 83 | 94 | |

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