2008000206020002
EXAMINATION OCTOBER 2024 (ATKT EXAM)
BACHELOR OF COMMERCE (HONORS) (SIXTH SEMESTER)
BUSINESS STATISTICS - II - LEVEL2

[**Time: As Per Schedule]** **[Max. Marks: 50]**

Instructions:
1. **Fill up strictly the following details on your answer book**
   a. Name of the Examination: **BACHELOR OF COMMERCE (HONORS) (SIXTH SEMESTER)**
   b. Name of the Subject: **BUSINESS STATISTICS - II - LEVEL2**
   c. Subject Code No: **2008000206020002**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. Simple calculator can be used.
6. Statistical tables and graph papers will be provided on request.
7. Usual notations are used.

Seat No:

Student's Signature

Q.1 A) For the plan [50,10,1] with p'= 6% then obtain the probability of acceptance. **4**

B) Obtain portability of acceptance for double sampling plan (2000,50,100,1,4) the proportion defective 2%. Also find AOQ, ASN, ATI. **8**

C) What is O.C curve? Explain ATI, LTPD **3**

Q.2 A) Define X^2 statistics and state its limitations. **4**

B) In the accounting department of a bank 100 accounts are selected at random and examined for errors. The following results have been obtained. **5**

No. of Errors	0	1	2	3	4	5	6
No. of Accounts	36	40	19	2	0	2	1

Does this information verify that the errors are distributed according to Poisson probability law?

C) Four dice were thrown 112 times and the number of times 1, 3 or 5 were as Under **3**

1, 3, or 5	0	1	2	3	4
Frequency	10	25	40	30	7

Q.3 A) A juice distributor purchases juice can at the rate of Rs. 8 pre can and sales it Rs. 12 per can. The can which are unsold are useless. During the last 100 days, the sale distribution of cans was found as follows. **6**

No. of cans sold	**No. of days**
20	5
21	20
22	30
23	35
24	10

1) Find expected monetary value for each stock decision. Which is Optimum Decision
2) Find expected opportunity loss for each stock decision.
3) If the unsold cans could be disposed off at Rs. 4 per can at the end of the day then which type of effect would be caused on the optimal decision?

B) What is decision theory? Explain the terms given below: **3**
1) Expected monetary value
2) Expected value of prefect information.

C) A toy manufacturing company wants to produce one new type of toy. The company requires to decide whether it should manufacture the toy with full, partial or minimal products line. The company's acceptance is under three types of modes: Good, Fair and Poor. The profit earned during the first year are as follows: **4**

	Profit		
Products acceptance	Full	Partial	Minimal
Good	80	70	50
Fair	50	45	40
Poor	-25	-10	00

Take the following decision under the following rules:
1) Laplace rule
2) Mini-max rule

Q.4 A) Test the hypothesis "Situation of the shop and sex of the shopkeeper are mutually independent "on the basis of the following data. **4**

	In a city	In a village
Managed by Man	17	18
Managed by Women	03	12

B) From the following table: **6**

Alternative	Events		
	E1	E2	E3
A	10,000	20,000	5,000
B	8,000	12,000	9,000
C	7,000	7,000	7,000
Probability	0.3	0.5	0.2

1) Find expected value of each alternative.
2) Find expected opportunity loss table, find EOL for each alternative and best alternative.
3) Find expected value of perfect information

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