

3 BOARD OF INTERMEDIATE & SECONDARY EDUCATION, SAHIVAL

SUBJECT: Stats EXAM HSSC 2nd/A 2022 CLASS: 1st Year
GROUP: _____ DATE: _____

(GENERAL INSTRUCTIONS FOR MARKING KEY)

Q No 3 Part (xii)

$$\text{Total cards} = 52 \quad (1 \text{ mark})$$

$$\text{Favourable cards} = 6$$

$$P(A) = \frac{n(A)}{n(S)} = \frac{6}{52} = \frac{3}{26} \quad (1 \text{ mark})$$

Q No 4

Award 2 marks for correct definition of

part (i), (iii), (iv), (v), (vi), (viii)

For Part (ii)

$$E(X^2) = 400 \quad S.D(X) = 12 \quad \text{var}(X) = 144$$

$$\text{var}(X) = E(X^2) - [E(X)]^2 \quad (1 \text{ mark})$$

$$144 = 400 - [E(X)]^2$$

$$[E(X)]^2 = 400 - 144 = 256$$

$$E(X) = \sqrt{256} = 16 \quad (1 \text{ mark})$$

For Part (vii)

$$n = 6, \alpha = 0.4 \quad P = 1 - \alpha = 0.6$$

$$\text{mean} = nP = 6 \times 0.6 = 3.6 \quad (1 \text{ mark})$$

$$\text{var} = nP\alpha = 6 \times 0.6 \times 0.4 = 1.44 \quad (1 \text{ mark})$$

$$\text{For Part (ix)} \quad N = 40, n = 5 \quad K = 4 \quad P = \frac{K}{N} = \frac{4}{40} = \frac{1}{10} \quad \alpha = \frac{9}{10}$$

$$\text{mean} = nP = 5 \times \frac{1}{10} = 0.5 \quad (1 \text{ mark})$$

$$\text{var} = nP\alpha \frac{N-n}{N-1} = 5 \times \frac{1}{10} \times \frac{9}{10} \times \frac{35}{39} = \frac{1575}{3900}$$

$$\text{var} = 0.40 \quad (1 \text{ mark})$$

PREPARED BY

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RE-CHECKED BY _____ تم نے درست کیا اور الیہ پور (انٹیمپٹ + معروفیات کے حوالے سے مکمل طور پر قلمی کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔)

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