

2

BOARD OF INTERMEDIATE & SECONDARY EDUCATION, SAHIWAL

SUBJECT: Statistics EXAM HSSC 2nd JA 2022 CLASS: 1st Year

GROUP: _____ DATE: _____

(GENERAL INSTRUCTIONS FOR MARKING KEY)

Q No 3 :-

Award 2 marks for correct definition of

Part (i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix), (x), (xi),

For Part (vi)

$$\mu_4 = 243$$

$$\beta_2 = \frac{\mu_4}{\mu_2^2} = 1 \quad (1 \text{ mark})$$

For mesokurtic dist $\beta_2 = 3$ $\mu_2 = \text{variance}$

$$\text{Hence } 3 = \frac{243}{\mu_2^2} \Rightarrow \mu_2^2 = \frac{243}{3} \quad (1 \text{ mark})$$

$$\mu_2^2 = 81 \Rightarrow \mu_2 = 9 \quad \text{S.D} = \sqrt{\mu_2} = 3$$

For Part (vii)

$$\mu_1 = 0, \mu_2 = 39.25, \mu_3 = -25.70, \mu_4 = 250.83$$

For Symmetry

$$\beta_1 = \frac{(\mu_3)^2}{(\mu_2)^3} = \frac{(-25.70)^2}{(39.25)^3} \quad (1 \text{ mark})$$

$$= 0.011 \text{ Not Symmetrical } (1 \text{ mark})$$

$$\text{For Part (ix)} \quad P(A) = 0.65, \quad P(B) = 0.45$$

$$P(A \cap B) = P(A) \cdot P(B) = (0.65)(0.45) = 0.29 \quad (1 \text{ mark})$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$= 0.65 + 0.45 - 0.29 \quad (1 \text{ mark})$$

$$= 0.81$$

PREPARED BY

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RE-CHECKED BY _____
 اے ایم ڈی جی اے ایم ڈی جی (انشائیہ و معروضی امور دیات کے حوالے سے مکمل طور پر تسلیم کر لیں گے۔ کسی قسم کی کاپی نہیں ہے۔)

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