SULIT

KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN PERDAGANGAN

PEPERIKSAAN AKHIR

SESI I : 2025/2026

DPB30093: QUANTITATIVE METHODS

TARIKH : 26 NOVEMBER 2025
MASA : 11.30 PAGI – 1.30 PETANG (2 JAM)

Kertas soalan ini mengandungi **LIMA (5)** halaman bercetak.

Struktur (4 soalan)

Dokumen sokongan yang disertakan : Kertas Graf dan Formula

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

INSTRUCTION:
This section consists of **FOUR (4)** structured questions. Answer **ALL** questions.

ARAHAN:
*Bahagian ini mengandungi **EMPAT (4)** soalan berstruktur. Jawab **SEMUA** soalan.*

QUESTION 1
SOALAN 1

CLO1 (a) Describe any **FIVE (5)** types of data collection methods.

*Terangkan mana-mana **LIMA (5)** jenis kaedah pengumpulan data.*

[10 marks]
[10 *markah*]

CLO1 (b) The frequency distribution below shows the age of farmers in Kg. Desa, Selangor.

Taburan kekerapan di bawah menunjukkan umur petani di Kg. Desa, Selangor.

Age *Umur*	Number of workers *Bilangan pekerja*
31 - 40	5
41 - 50	4
51 - 60	10
61 - 70	13
71 - 80	5
81 - 90	3

From the table, simplify the calculation for mean and mode.

Daripada jadual, permudahkan kiraan min dan mod.

[15 marks]
[*15 markah*]

QUESTION 2
SOALAN 2

The table shows the number of customers at Abah Cafe in 30 days.
Jadual menunjukkan bilangan pelanggan di Kafe Abah selama 30 hari.

20	22	40	32	40	49	20	16	14	20
27	16	19	35	15	15	21	22	20	15
24	25	22	18	20	24	16	25	18	32

CLO1 (a) Convert data above into frequency distribution table consisting of class interval, frequency, midpoint and class boundaries.
Tukarkan jadual taburan kekerapan yang mengandungi selang kelas, kekerapan, titik tengah dan sempadan kelas.

[10 marks]
[*10 markah*]

CLO1 (b) From the table above, draw 'less than' ogive.
Daripada jadual di atas, lukis 'kurang daripada" ogif.

[10 marks]
[*10 markah*]

CLO1 (c) Derive from the table 2 (a), compute the value of mode.
Daripada jadual 2 (a) yang telah dijana, kira nilai mod.

[5 marks]
[*5 markah*]

QUESTION 3
SOALAN 3

The table shows the age of the workers in a Seriy Maju Company.
Jadual menunjukkan umur pekerja Syarikat Seriy Maju.

Age	Number of workers
20	4
30	8
40	7
50	5
	$\sum f = 24$

CLO1 (a) From the table above, calculate standard deviation.
Daripada jadual di atas, kira sisihan piawai.

[15 marks]
[*15 markah*]

CLO1 (b) An experiment was carried out on the rearing of cow. The mass gain (in Kilograms) of the sample of 30 cows during a certain period was recorded in the following table. Determine the value of median.

Satu eksperimen telah dijalankan ke atas ternakan lembu. Keuntungan jisim (dalam Kilogram) sampel 30 ekor lembu dalam tempoh tertentu direkodkan dalam jadual berikut. Tentukan nilai median.

Mass gain(kg)	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34
Frequency	3	5	6	2	10	4

[10 marks]
[*10 markah*]

QUESTION 4
SOALAN 4

CLO1 (a) Given the following set of data:
Diberikan data seperti berikut:

15	16	21	25	21	31	20

Calculate mean, median and mode.
Kira mean median dan mod.

[10 marks]
[*10 markah*]

CLO1 (b) Fifty students were asked if they watched football yesterday. 20 of the students are boys. 15 girls watched football yesterday. 30 students did not watch football yesterday. Transform the above data into two- way table.

Lima puluh pelajar ditanya sama ada mereka menonton bola sepak semalam. 20 daripada pelajar adalah lelaki. 15 orang pelajar perempuan menonton bola sepak semalam. 30 pelajar tidak menonton bola sepak semalam. Tukar data di atas kepada jadual dua hala.

[15 marks]
[*15 markah*]

SOALAN TAMAT

FORMULA QUANTITATIVE METHODS

$k = 1 + 3.3 \log_{10} n$

R = Highest value – Lowest value

$$c = \frac{Range}{k}$$

$$\tilde{x} = \frac{\sum fx}{\sum f}$$

$$\bar{x} = \text{LM} + \left(\frac{\frac{\sum f}{2} - \sum fm^{-1}}{fm} \right) c$$

$$\hat{x} = \text{LB} + \left(\frac{\Delta_1}{\Delta_1 + \Delta_2} \right) c$$

$$\hat{x} = \tilde{x} - 3(\tilde{x} - \bar{x})$$

$$s^2 = \frac{1}{\sum f - 1} \left(\sum fx^2 - \frac{(\sum fx)^2}{\sum f} \right)$$

$$s = \sqrt{s^2}$$

$$\text{PCS I} = \frac{\tilde{x} - \hat{x}}{s}$$

$$\text{PCS II} = \frac{3\,(\tilde{x} - \bar{x})}{s}$$

$$r = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2]\,[n\sum y^2 - (\sum y)^2]}}$$

$$\rho = 1 - \frac{6\sum d^2}{n\,(n^2 - 1)}$$

$$b = \frac{n\sum xy - (\sum x)(\sum y)}{\sum x^2 - (\sum x)^2}$$

$$a = \frac{\sum y}{n} - b\,\frac{\sum x}{n}$$

$$y = a + bx$$

$$P(A) = \frac{n\,(A)}{n\,(S)}$$

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

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

$$P(A) = \frac{n\,(A)}{n\,(S)}$$

$$P(A|B) = \frac{P(A \cap B)}{P(B)}$$

$$P(B|A) = \frac{P(A \cap B)}{P(A)}$$