SUMMATIVE ASSESSMENT - 1, 2015-16 Gurdittingh MATHEMATICS

Class - X

Time Allowed: 3 hours

Maximum Marks: 90

General Instructions:

- All questions are compulsory.
- The question paper consists of 31 questions divided into four sections A, B, C and D. Section-A comprises of 4 questions of 1 mark each; Section-B comprises of 6 questions of 2 marks each; Section-C comprises of 10 questions of 3 marks each and Section-D comprises of 11 questions of 4 marks each
- There is no overall choice in this question paper.
- Use of calculator is not permitted.

SECTION-A

Question numbers 1 to 4 carry one mark each.

In AABC, D and E are points on the sides AB and AC respectively such that DE | BC, If 1 AE = 5.4 cm, EC = 3.6 cm and AD = 3 cm, then find BD.

Find the value of $tan(65^{\circ}-\theta) = \cot(25^{\circ}+\theta)$.

If A and B are acute angles of a right angled triangle ABC such that sinA = cosB, find the value 1 of A+B.

In the following distribution, find upper limit of median class:

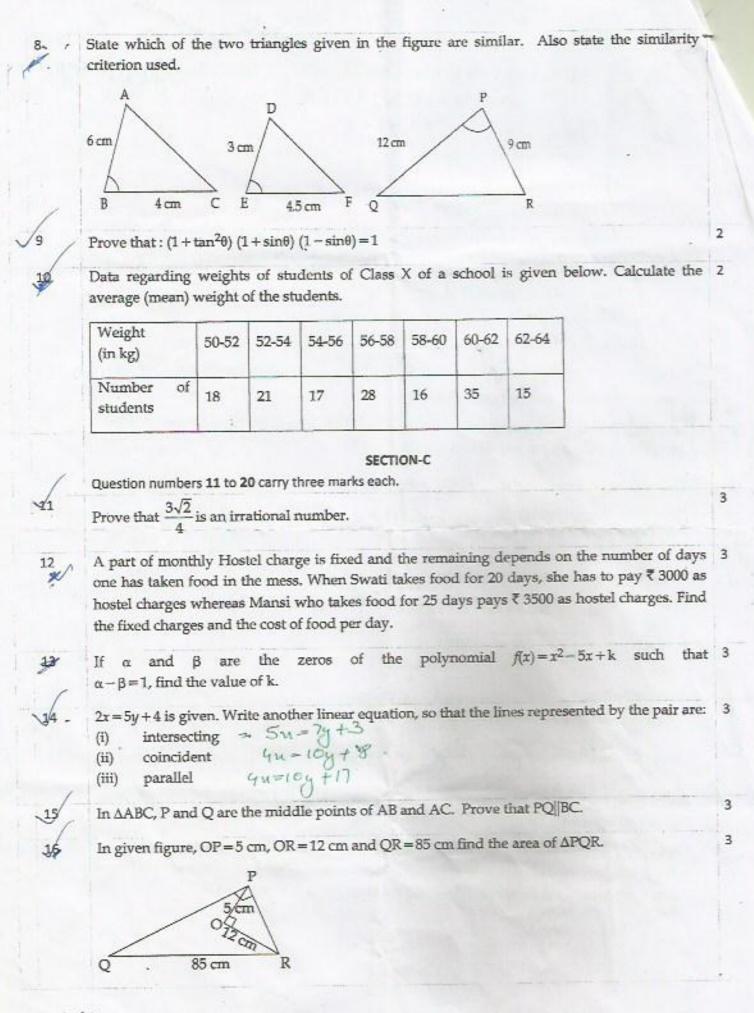
Class interval	0-8	8-16	16 - 24	24 - 32	32 - 40	40 - 48
Frequency	7	9	10	8	12	8

Question numbers 5 to 10 carry two marks each.

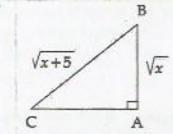
Write the decimal expansion of $\frac{1717}{2^2 \times 6^3}$ without actual division.

State Euclid division lemma. If Euclid lemma is used for a a b as a = b q + r, then which of a, b, aq, erris necessarily zero

A lending library has a fixed charge for the first two days and an additional charge for each 2 day thereafter. Abdul paid ₹ 30 for a book kept for 6 days while Kaira paid ₹ 45 for a book kept for 9 days. Find the fixed charge and the charge for each extra day.



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In the \triangle ABC (see figure), \angle A = right angle, AB = \sqrt{x} and BC = $\sqrt{x+5}$.

Evaluate:

sinC, cosC, tanC + cos2C, sinA

If cosecA $-\cot A=q$, then show that $\frac{q^2-1}{q^2+1}+\cos A=0$.

If $\cos\theta = \frac{3}{5}$, find the value of $\left(\frac{5 \csc\theta - 4 \tan\theta}{\sec\theta + \cot\theta}\right)$.

Find the mode of the following frequency distribution

Class interval	f
25 - 35	7
35 - 45	31
45 - 55	33
55 - 65	17
65 - 75	11
75 - 85	1

If mode of the following data is 32.5 and sum of frequencies is 70, then find the missing frequencies x and y:

Class	25-30	30-35	35-40	40-45	45-50	50-55	55-60
Frequency	x	22	y	8	7	3	2

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