

FIRST YEAR HIGHER SECONDARY EXAMINATION, MARCH -2017

(Scheme of valuation)

SUBJECT : COMPUTER SCIENCE

CODE: NO 619

Qn No.	Sub Qns	Answer Key /Value Points	Score	Total
1		9E		1
2	a	Registers-Cache-RAM-Hard disk		1
	b	Freeware- free of charge, available for use for unlimited period	$\frac{1}{2}$	1
		Shareware- distributed on trial basis / sharing	$\frac{1}{2}$	
3		C- Others has only one entry flow & one exit flow OR B- Used for both linput and Output	$\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$	1
4	a	do while loop / Exit controlled loop	1	1
	b	1 3 7 9	1	1
5		85	1	1
6		isalnum()	1	1
7	a	gateway	1	1
	b	Rules and regulations folllowed on network / set of rules	4 x $\frac{1}{2}$	2
8		Worm – C Hacking – B Phishing – D Spam - A		
9		(11011010) ₂ Binary Form 2's compliment	1 1 2	2
10		Correct algorithm / program (Partially correct – 1 score) OR Correct flowchart (Partially correct – 1 score)	2 OR 2	2
11		For identifying A and C asInvalid Reason for each	$\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$	2
12		3 (a+b+c)/3.0 or float (a+b+c)/3 or int a,b, c replaced by float a,b,c or use of type casting	1 1	2
13		For identifying diagonal elements using loop For addiotion of elements OR Proper syntax and proper loop	1 1 OR 1 + 1	2
14		We can input string with white space OR Proper example with explanation	2 OR 2	2

$\frac{1}{2}$

15		111 (If use the word recursive function – 1 score) (Any relevant attempt to solve the problem – 1 ½ score)	2	2
16		For each comparison – 1 score each OR Three features of any three generations	1+1+1 OR 1+1+1	3
17		Correct use of gates Proper connection OR Correct use of laws for derivation Specification of laws	2 1 OR 2 1	3
18		Correct Explanation (Partially Correct – give appropriate mark)		3
19		Preprocessor directive Header files Main() function (if write names only give 1/2+1/2+1/2)	1 1 1	3
20		Proper steps and use of nesting or use of program		3
21		Any one proper distinction point Example for each type of call and explanation OR Correct example	1 1+1 3	3
22		Explanation of any 3 types	1+1+1	3
23		Sender- SMTP server – internet- receiving server- placed in recipient's mailbox- checks mailbox- read mail OR If write about e-mail Structure of e-mail or diagrammatic representation	½ x6 1 ½ 3	3
24		Block diagram Explanation of units	2 3	5
25		Correct program structure, declaration, I/O statement Correct logic OR Correct program structure, declaration, I/O statement Correct logic	1+1+1 2 1+1+1 2	5

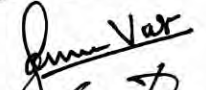
1. BINOJ CHACKO JJMM HSS, YENDAYAR, KOTTAYAM
2. BAIJU GS SNV HSS, NEDUNGANDA,
THIRUVANANTHAPURAM
3. ROY JOSE SCHSS, PAYYAMPALLY, WAYANAD
4. LAKSHMIJA P S AKMHSS, MYLAPORE, KOLLAM
5. JAMUNA VASU PHSS, MEZHUVELI, PATHANAMTHITTA
6. BOBY PUDUKADEN ST THOMAS HSS, THOPE, THRISSUR
7. JOHN JOSEPH LIO XIII HSS ALAPPUZHA


9946645695


9447012471











FIRST YEAR HIGHER SECONDARY EXAMINATION MARCH 2017

SUBJECT : STATISTICS

CODE. NO: 620

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
1.	a.	June 29 - (b)	1	3
	b.	Any 4 points $\frac{1}{2}$ each.	2	
2.		(a) 100	1	1
3.	a.	(b) 5 times the original value.	1	4
	b.	$\bar{x} = \frac{\sum wx}{\sum w} \quad \text{or} \quad \bar{x} = \frac{\sum fx}{\sum f}$ $= \frac{3 \times 82 + 5 \times 86 + 3 \times 90 + 2 \times 88}{13} = \underline{86.30769}$ $= \frac{1122}{13}$	$\frac{1}{2}$ $\frac{1}{2} + \frac{1}{2} + \frac{1}{2}$	
4.		$H.M = \frac{n}{\sum (\frac{1}{x})}$ $= \frac{4}{\frac{1}{100} + \frac{1}{200} + \frac{1}{300} + \frac{1}{400}}$ $= \frac{4}{\frac{1}{48}} = \underline{192} \text{ (approximately)}$ OR <u>A</u> $0.01 + 0.005 + 0.003 + 0.0025$ (Give 1 score for finding A.M)	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$	2
5	a.	$\text{Mode} = 3\text{Median} - 2\text{Mean}$ $64.2 = 3 \times 68.6 - 2 \times \text{mean}$ $2\text{mean} = 141.6$ $\text{mean} = 70.8$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	(2)
	b.	$\text{mode} = l + \left[\frac{c(f_1 - f_0)}{2f_1 - f_0 - f_2} \right]$ modal class, 25 35, $l = 25$, $c = 10$, $f_0 = 13$, $f_1 = 22$, $f_2 = 18$.	$\frac{1}{2}$	

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		$= 25 + \frac{10(22-13)}{2 \times 22 - 13 - 18} = 25 + 6.923$ ≈ 31.923 (OR use mode = $l + \frac{cf_2}{f_1 + f_2} = 30.9$)	$\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2}$ (3)	5
6.	a.	any answer give full score.	1	4
	b.	explanation or example	3	
7.	a.	d, indirect-oral interview.	1	1
8.		a $\rightarrow$ 4, b $\rightarrow$ 1, c $\rightarrow$ 2, d $\rightarrow$ 3	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$	2.
9.		Any 4 points - $\frac{1}{2}$ each	2	2
10		c - 6 ⁸	1	1
11	a.	$P(A \cup B) = P(A) + P(B) - P(A \cap B)$ $\frac{1}{2} = \frac{1}{4} + \frac{2}{5} - P(A \cap B)$ $P(A \cap B) = \frac{3}{20}$ $P(A \cap B^c) = P(A) - P(A \cap B) = \frac{1}{4} - \frac{3}{20} = \frac{1}{10}$ OR $P(A^c \cup B^c) = 1 - P(A \cap B) \quad (\frac{1}{2})$ $= 1 - \frac{3}{20} = \frac{17}{20} \cdot (\frac{1}{2})$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$	2.
	b.	anyone (a or b) give full score 2		
12	a.	Total cases - 10, favourable cases = 6 $P = \frac{6}{10} = \frac{3}{5}$	$\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2}$	3
	b.	Favourable cases = $4C_2$ Total cases = $10C_2$ $P = \frac{4C_2}{10C_2}$	$\frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$	

OR $P = \frac{4}{10} \times \frac{3}{9}$

$\frac{2}{5}$

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
13.	a.	OR $2/52, b = 8/52, c = \frac{48}{52}$	1+1+1	3
14.		Proper explanation		2
15.	a.	Frequency polygon	1	4
	b.	Proper class formation 2.5-7.5 2.5-7.5, 7.5-12.5, 12.5-17.5, 17.5-22.5 2 4 3 7 22.5-27.5 27.5-32.5 32.5-37.5 6 3 1	1	
		give 2 score for correct frequency	2	
16.	a.	$P(A B) = \frac{P(A \cap B)}{P(B)} = \frac{2}{5} = 0.4$ OR $A = \{(1,5), (5,1), (2,4), (4,2), (3,3)\}$ favourable cases (4,2), (2,4) $\therefore P = 2/5$	2.	4
	b.	entry level give full score.	2	
17.		B_1 - selecting packet $\underline{I}$ B_2 - " $\underline{II}$ $P(B_1) = 1/2, P(B_2) = 1/2, P(A B_1) = 2/10$ $P(A B_2) = 1/12$ $P(B_1 A) = \frac{P(B_1) \times P(A B_1)}{P(B_1) \times P(A B_1) + P(B_2) \times P(A B_2)}$ $= \frac{1/10}{(1/10 + 1/24)} = \frac{12}{17} = 0.7059$	$1/2$ $1/2$ $1/2 + 1/2$ 1 $1/2 + 1/2$	4

Qn No	Sub Qns	Answer Key/Value Points	Score	Total																																																																
18.		quantitative	1	1																																																																
19.		<table><thead><tr><th>class</th><th>fre.</th><th>UL</th><th>LCF</th><th>LL</th><th>GCF</th><th>RF</th><th>%F</th></tr></thead><tbody><tr><td>0-10</td><td>5</td><td>10</td><td>5</td><td>0</td><td>55</td><td>5/55</td><td>9</td></tr><tr><td>10-20</td><td>7</td><td>20</td><td>12</td><td>10</td><td>50</td><td>7/55</td><td>13</td></tr><tr><td>20-30</td><td>17</td><td>30</td><td>29</td><td>20</td><td>43</td><td>17/55</td><td>31</td></tr><tr><td>30-40</td><td>12</td><td>40</td><td>41</td><td>30</td><td>26</td><td>12/55</td><td>22</td></tr><tr><td>40-50</td><td>5</td><td>50</td><td>46</td><td>40</td><td>14</td><td>5/55</td><td>9</td></tr><tr><td>50-60</td><td>2</td><td>60</td><td>48</td><td>50</td><td>9</td><td>2/55</td><td>3</td></tr><tr><td>60-70</td><td>7</td><td>70</td><td>55</td><td>60</td><td>7</td><td>7/55</td><td>13</td></tr></tbody></table> For any two correct tables give full score.	class	fre.	UL	LCF	LL	GCF	RF	%F	0-10	5	10	5	0	55	5/55	9	10-20	7	20	12	10	50	7/55	13	20-30	17	30	29	20	43	17/55	31	30-40	12	40	41	30	26	12/55	22	40-50	5	50	46	40	14	5/55	9	50-60	2	60	48	50	9	2/55	3	60-70	7	70	55	60	7	7/55	13		4
class	fre.	UL	LCF	LL	GCF	RF	%F																																																													
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60-70	7	70	55	60	7	7/55	13																																																													
20	a	15	1																																																																	
	b.	$\bar{x} = \frac{18.2}{7} = 2.6$ $M.D = \frac{\sum x - \bar{x} }{n}$ $= \frac{1}{7} [0.3 + 0.8 + 0.6 + 0.1 + 0.1 + 0.4 + 0.1]$ $= 2.4/7 = 0.341$	1 1 1/2 1 1/2	4																																																																
21.		b An average of Square of deviations from the mean	1	1																																																																
22.		<table><thead><tr><th>x</th><th>x²</th><th>y</th><th>y²</th></tr></thead><tbody><tr><td>55</td><td>3025</td><td>108</td><td>11664</td></tr><tr><td>54</td><td>2916</td><td>107</td><td>11449</td></tr><tr><td>52</td><td>2704</td><td>105</td><td>11025</td></tr><tr><td>53</td><td>2809</td><td>105</td><td>11025</td></tr><tr><td>56</td><td>3136</td><td>106</td><td>11236</td></tr><tr><td>58</td><td>3364</td><td>107</td><td>11449</td></tr><tr><td>52</td><td>2704</td><td>104</td><td>10816</td></tr><tr><td>50</td><td>2500</td><td>103</td><td>10609</td></tr><tr><td>51</td><td>2601</td><td>104</td><td>10816</td></tr><tr><td>49</td><td>2401</td><td>101</td><td>10201</td></tr><tr><td>530</td><td>28160</td><td>1050</td><td>110250</td></tr></tbody></table> $\bar{x} = 53 \quad \bar{y} = 105$ $\sigma_x = \sqrt{\frac{\sum x^2}{n} - (\bar{x})^2}$ $= \sqrt{7} = 2.646$ $\sigma_y = \sqrt{\frac{\sum y^2}{n} - (\bar{y})^2}$ $= \sqrt{4} = 2$ $C.V \text{ of } x = \frac{\sigma_x}{\bar{x}} \times 100$ $= \frac{2.646}{53} \times 100$ $= 4.99\%$ $C.V \text{ of } y = \frac{\sigma_y}{\bar{y}} \times 100$ $= \frac{2}{105} \times 100$ $= 1.90\%$ y is more consistent	x	x ²	y	y ²	55	3025	108	11664	54	2916	107	11449	52	2704	105	11025	53	2809	105	11025	56	3136	106	11236	58	3364	107	11449	52	2704	104	10816	50	2500	103	10609	51	2601	104	10816	49	2401	101	10201	530	28160	1050	110250	Table-2 1 1/2 1/2 1/2 1/2	5																
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Qn. No. Sub. Que.

Answer key / value Points

Score Total

23.

x	f	fx	fx^2
100	19	1900	190000
110	23	2530	278300
120	36	4320	518400
130	70	9100	1183000
140	52	7280	1019200
	200	25130	3188900

$$\bar{x} = \frac{\sum fx}{N} = \frac{25130}{200} = \underline{\underline{125.65}}$$

$$\sigma = \sqrt{\frac{\sum fx^2}{N} - \bar{x}^2}$$

$$= \underline{\underline{12.513}}$$

2

1

5

2

24. a. $i \rightarrow Q_1 + Q_3 = 2Q_2$.

1

b. Finding skewness or kurtosis by raw data or any other proper attempt

4

5

5/5

1. Shija Philip S...
2. SATIDA-N. K. Sauls
3. Ambily. A. A...
4. Sheeba. S. Sh...
5. Hasini M. C. H...
6. Smith. M. S. SMITH
7. Vejayakumar. R. VR
8. Sasi. E. P. S...
9. Premarajan. P. K. PK
10. Seby Jose. P. SE
11. Santhosh V. C. SV

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
1.		Extension Education	1	1
2.		$\frac{MA}{CA} \times 100$	1	1
3.		The trunk and limbs grow slowly than other parts of the body	1	1
4.	a. Play leads to happiness, helps to prevent boredom, helps to reduce stress, divert aggressive instincts, helps to discover, create, experiment, concentrate, express ideas, develop muscles, (Any 3 points from the above) b. Sewing cards, threading beads, dot to dot, drawing (Any relevant answer may be scored)	1 1 1 1	4	
5.	b. Period of infancy	1	1	
6.	a. DOTS - Directly Observed Treatment Schedule b. CRS - Congenial Rubella Syndrome	1 1	2	
7.	a. Muscular dystrophy	1		

Qn No	Sub Qns	Answer Key/Value Points	Score	Total	
	b.	Haemophilia	1	3	
	c.	Gout	1		
8.				2	
		Anorexia Nervosa	Bulimia Nervosa		
		* Self Starvation * Severe loss of wt. * May lead to death * Skipping of meals	* Binge - purge eating pattern * Self induced vomiting * Eating high calorie food.		1 1
		Any one point from each			
9.	a.	Fatigue is a feeling of extreme physical or mental tiredness	2.	4.	
	b.	* Making the work interesting * Keeping time management * Having proper and well planned place of work. * Having efficient work equipments * Motivating workers to develop skills * Making the work environment more pleasant and enjoyable * Allowing free time in work schedule * Appreciating workers * Making the work familiar * Changing routine * Providing periods of rest and relaxation * Setting small goals. (Any 6 points)	1 1		

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
10.		Positive effects - Green is nature's colour, healing, soothing, peaceful and cool Negative effects - Green represent selfishness, jealousy and laziness (Any 1 point from each)	1 1	2
11.		Management helps to * Achieve goals * Utilise our resources properly * Make our life more systematic * Avoid wastage of resources * Increase efficiency in work * Achieve a better standard of life (Any 3 points from the above)	1 1 1	3
12.	a.	1. Appearance (Compare skin colour, nose, lips, teeth & figure) 2. Girls worry about the hair on face and legs. 3. Fear 4. Anxiety 5. Inferiority complex 6. Lack of self esteem 7. Bullying or neglect from friends 8. Sickness 9. Conflict (parents, teachers, society) (Any 2)	1 1	
	b.	Personal problems of adolescents lead		

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		to stress, substance abuse, depression suicide etc. (Any relevant answer should be given scores)	2	4
13.	a.	Analogous harmony - Blue, Bluegreen, green	1	3
	b.	Split Complementary - yellow, Red violet and Blue violet	1	
	c.	Triad - Orange, green violet	1	
14.		Money income - Salary Direct real income - Use of library Indirect real income - Fringe benefits	1 1 1	3
15.		*. Breast milk provides all nutrients in the right proportion *. It helps to develop immunity *. It protect against common illness and respiratory illness and cardiovascular diseases *. It improves cognitive development *. It provide hormones that promote physical development *. It provides emotional security to the child. Preparation of poster Any 2 points	1 1 1 1	3

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
16		Any suitable illustration should be given scores	2	2
17.		Democratic disciplinary technique * It helps to develop independence in thinking * Achieve healthy, positive confident self concept * Cooperate with people with friendliness approach * Achieve greater creativity * No harsh punishment * Emphasis growth, self discipline and self control * Reward and praise is given when needed * Punishment is given only at appropriate times (Any 2 points may be scored)	1 1 1	3
18		Responsibility as a good parent Responsibility towards other family members. Responsibility towards the living society Each point with brief explanation	1 1 1	3

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
19		* <u>Vertical lines</u> - suggest life, activity. They may be severe, strong and direct and disciplined in the effect they produce. They create a feeling of height. * <u>Horizontal lines</u> - suggest repose, steadiness, tranquillity and solid stability. * <u>Zigzag lines</u> - create excitement * <u>Curved lines</u> - it indicate gracefulness and transition. They add grace, femininity and flexibility. (Any 3 lines from the above) and any 1 character from each	1 1 1	3
20.		<u>Characteristics of Mental Retardation</u> * Slow reaction * Absence of clarity * Inability to learn fast * Inability to understand quickly * Inability to decide * Lack of concentration * Short temper * Inability to remember * Lack of coordination * Distinguishable physical appearance	1 1 1	

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		<u>Preventive Measures.</u> * Avoid marriage between close blood relatives * Proper pre-natal care including immunization, good diet and medical check up. * Delivery attended by trained person * Proper weaning food * Genetic counselling and voluntary birth control * Proper mother and child care. * Provision for public education (Any 3 points from each OR.) Juvenile delinquency is a type of abnormal or anti social behaviour by a juvenile who is below the age specified by the statute. Causes - Poverty, family, lack of appropriate guidance and discipline, home situation, victims of abuse, school drop outs, exposure to media, peer influence, lack of appropriate sex education, gang culture (Any 4 points from above)	1 1 1 2 1 1 1 1	6 6
21.		<u>Merits</u> It assist in making right choices, gives information about ingredients, Standard marks helps to see the quality of the product, helps to identify		

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		compare and check rates, In case of complaint the consumer can be directly contacted from the address in the label, gives guidance about the storage and use of the product, special schemes are also mentioned, the consumer can refer to the label when required. <u>Demerits</u> * Some labels may not give complete correct information * The print may not be clear or very small or overlapping. * Labels may mislead regarding the quality and quantity (Any 3 points from merits and demerits) OR * The act is applicable on both goods and services * Consumer redressal forum * Provision to settle the complaint within 3 months * It defines the rights of consumer * No fee for lodging complaint * The terms like defect, deficiency, unfair trade practices has been defined in this act. (The above points with brief explanation)	1 1 1 1 1 1 1 1 1 1 1	6 6

Preethi George.

ASST Home Science

Govt. HSS Piravom
Ernakulam

~~Preethi George~~
~~30.03.2017~~

9495233658

Lissy John
ASST Home Science.
Sacred Heart HSS

Payyavoor, Kanner

~~Lissy John~~
~~30/03/2017~~

9447638854

FIRST YEAR HIGHER SECONDARY EXAMINATION —ARCH 2017

SUBJECT : GEOLOGY

CODE. NO: 622

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
1	i) & ii) a/b	Conducts geological surveys and studies - provides earth science information - development of mineral resources - protection of environment in mines - any two points	1+1	2
2	a)	Permeability - ability of rocks to transmit water through it All permeable rocks are porous / All porous rocks may not be permeable / water moves only if pore spaces are interconnected (Any one point)	1 1	2
3	a) b) c)	Geomorphology Petrology Hydrogeology / Hydrology	1 1 1	3
4	a) b) c)	Volcanic mountains Fold mountains Western Ghats / Eastern Ghats / Satpuras / Aravallis / Vindhya	1 1 1	3
5		Hydration, Hydrolysis, Oxidation, Carbonation, Solution, Spheroidal weathering (Any three names OR	1+1+1	

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		Explanation of any two means of chemical weathering-	$1\frac{1}{2}+1\frac{1}{2}$	3
6		Diagram of soil profile OR Explanation of A, B, C Horizons	1+1+1	3
7	a) ii) Diamond b) Moh's hardness scale/scratching the given mineral/Degree of resistance to scratching - (Any one point)	1 2	3	
8		Any three examples of minerals and use in daily lives in any three fields	1+1+1	3
9		Delta - Roughly triangular - Deposition at the river mouth Pot holes - Cylindrical/circular - Depression in stream channel Oxbow lake - Crescent shape - Detached meander loop A to B / B to C / A to C - Matching	1+1+1	3
10	(a) iii) Nebular hypothesis - Chamberlin and Moulton (b) Proposed by Chamberlin and Moulton - Passing of a larger star nearby	1		

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		the primordial sun - Creation of large tidal waves by the near approach of the larger star - pull out of solar mass - chilling - formation of planetesimals - mutually collision - combined to form planets (<u>Any two points</u>)	2	3
11	a) True b) False c) True		1 1 1	3
12	A	Glaciers - large mass of moving ice Explanation <u>OR</u> Examples of mountain glaciers and continental glaciers	1 1+1	3
	B	<u>OR</u> a) Glacial trough:- mountain valley reshaped by glacial action b) Hanging valleys:- Tributary glacial valleys that hang above the floor of the main valley c) Cirque:- Semi circular depression present at the valley head	1+1+1	3
13	a) b)	Salinity:- amount of salts dissolved in 1000 gms of water Rainfall, evaporation, river run off, ice formation, glacial melting, (Any two factors)	1 1+1	3

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
14		waves interaction with the shore/feels bottom/can't move further forward (Any one point) Coastal Cliff/Sea stack/ Arches/ Wave cut benches/Spits /Bars/Beaches/ Tombolo, etc. Names of any two coastal land forms OR Explanation of any two coastal land forms	1 2 OR 1½+1½	3
15		Fit of continents, fossil evidence, paleoclimatic evidence, similarity of rock types, (Any two evidences) Driving force or mechanism of movement could not be explained OR Any three evidence for continental drift hypothesis	2 1 1½+1½	3
16	b) c) d)	Plates move away from each other Mariana Trench /Trench/ Himalayas Subduction zone Transform fault /shear boundary/ Conservative boundary	1 1 1	3

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
17	a) iii) Saltation b)	Removal of fine sized particles / ground surface lowers / Coarser sand remains / topography changes / any <u>one</u> relevant point	1 2	3
18	A	Downslope movement of rock / soil Names of any two types of mass movement (Creep, fall, slide, topples, flow, avalanches, subsidence, solifluction, sheet or gully erosion, etc.) OR Explanation of any one type	1 1 + 1 OR 2	3
	B	Angle of repose:- natural angle at which rock material will rest without slipping - maximum slope angle that unconsolidated material can maintain - Diagram showing angle of repose (Any one point or diagram) Force of gravity and ^{friction} angle of repose are in balance at the angle of repose OR Any two points related with the angle of repose.	2 1 OR 1 1/2 + 1 1/2	3

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
19	A	Diagram or explanation of any four layers (Crust, Mantle, Outer core, Inner core)	4	4
	B	OR Explanation of any four layers (Lithosphere, Asthenosphere, Mesosphere, Outer core, Inner core) or <u>diagram</u>	4	
20		Confined aquifer:- aquifers that are bound above and below by impermeable layers Unconfined:- aquifers that are open to the atmosphere. Diagram representing artesian well and confined aquifer OR: Explanation of artesian well (Condition of artesian well formation/ aquifer under hydrostatic pressure/ free or self flowing well - any one point) - (two marks)	1 1 2	4

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Kasaragod (14005)

Uthman

2. Hamza-N
SSM HSS Theyyalingal
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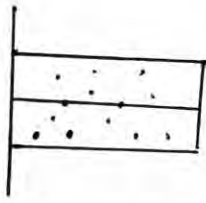
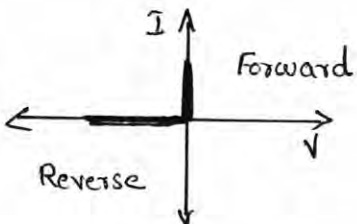
FIRST YEAR HIGHER SECONDARY EXAMINATION MARCH 2017

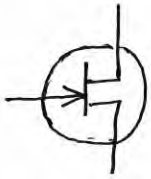
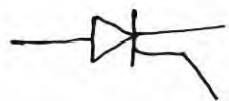
SUBJECT : ELECTRONICS

CODE. NO: 623

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
1		Mobile phone, Computer, RADAR, ECG (Any four)	$4 \times \frac{1}{2}$	2
2	a	$47 \times 10^3 \pm 5\% = 47 \text{ k}\Omega \pm 5\%$	2	4
	b	5% $47 \text{ k}\Omega = 2.35 \text{ k}\Omega$ $44.65 \text{ k}\Omega$ and $49.35 \text{ k}\Omega$	2	
3	a	<u>Ideal</u> • Zero internal resistance • o/p voltage = i/p voltage <u>Practical</u> • It has some internal resistance • o/p voltage less than i/p voltage (Any related two points)	(2)	3
	b	0	1	
4		1) Peak voltage = 5V 2) $V_{rms} = \frac{V_m}{\sqrt{2}} = \frac{5}{\sqrt{2}} = 3.54$ 3) $2\pi f = 628 \times 10^3$ $f = \frac{628 \times 10^3}{2\pi} = 100 \text{ kHz}$ $2T = \frac{1}{f} = \frac{1}{100 \times 10^3} = 0.01 \text{ ms}$ 4) $\phi = 30^\circ$	4×1	4

1/5

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
5	a	Very large or greater than 3 eV	1	3
	b		1	
	c	Conduction band	1	
6		Boron, Gallium, Indium, Aluminium (Any two)	$2 \times \frac{1}{2}$	1
7	a	Silicon = 0.7V Germanium = 0.8V	$2 \times \frac{1}{2}$	2
	b	0	1	
8		$5 - (0.7 \times 2) = 3.6V$	2	2
9			1+1	2
10	a	Emitter, Base, Collector	1	4
	b	Emitter	1	
	c	Collector	1	
	d	Amplifier, switch	$\frac{1}{2} \times 2 = 1$	

Qn No	Sub Qns	Answer key / Value points	Score	Total
11		High voltage gain and high current gain OR High power gain	2	2
12	a	 npn transistor		
	b		4 x $\frac{1}{2}$	2
	c			
	d			
13		TRIAC - motor speed control LDR - Light detection LED - Electricity to light conversion Thermistor - Temperature measuring	4 x $\frac{1}{2}$	2
14	a	Diode	1	
	b	To reduce the line voltage to the desired level	2	5
	c	The capacitor is a filter and it removes the ripples	2	

Qn No	Sub Qns	Answer key / Value points	Score	Total
15		81.2 %	1	1
16	a	Gain = $\frac{\text{o/p voltage}}{\text{i/p voltage}}$	1	
	b	$\text{o/p} = 100 \sin 100 \pi t$	2	4
	c	$30 \times 20 = 600$	1	
17		R_E	1	1
18	a	Radio, TV, Radar, Mobilephone (any two)	$2 \times \frac{1}{2}$	1
	b		1×2	4
	c	resistive loss in feed back circuit	1	
19		positive	1	1
20		360°	1	1
21	a	16	1	
	b	$2 \times 4^2 + 3 \times 4^1 + 1 \times 4^0 = 32 + 12 + 1 = (45)_{10}$	2	3
22	a	$(100010)_2$ (steps needed)	2	
	b	$(22)_{10}$ (steps needed)	2	4
23		CRO	1	1

Qn No	Sub ans.	Answer key / Value points	Score	Total
24		The number of divisions along x-axis within one cycle multiplied by the reading on the time/div knob, we get time period $f = \frac{1}{T}$ Baiju Baiju. A.J. HSST (Electronics) SAHSS karimkunnam <u>Viphy</u> Viphy markose HSST- Electronics Govt HSS manayamuttom	2	2