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ਵੱਲ

ਸਮੂਹ ਜਿਲ੍ਹਾ ਸਿਖਿਆ ਅਫਸਰ (ਸੈ.ਸਿੱ.)

ਸਮੂਹ ਸਕੂਲ ਮੁਖੀ (ਵੈਬਸਾਈਟ ਰਾਹੀਂ)

ਸਬੰਧਤ ਲੈਕਚਰਾਰ/ ਅਧਿਆਪਕ (ਵੈਬਸਾਈਟ ਰਾਹੀਂ)

ਪੰਜਾਬ।

ਮੀਮੋ ਨੰ: SCERT/Math/2019/64877 ਮਿਤੀ:- 06-06-2019

ਵਿਸ਼ਾ :- ਗਿਆਰਵੀਂ ਅਤੇ ਬਾਰ੍ਹਵੀਂ ਜਮਾਤ ਦੇ ਗਣਿਤ ਵਿਸ਼ੇ ਦੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ Test Series ਸਬੰਧੀ।

1. ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਵੱਲ ਧਿਆਨ ਦੇਣ ਦੀ ਖੇਚਲ ਕੀਤੀ ਜਾਵੇ ਜੀ।

2. ਗਣਿਤ ਵਿਸ਼ੇ ਵਿੱਚ ਪਰਿਪੱਕਤਾ ਲਿਆਉਣ ਲਈ ਗਿਆਰ੍ਹਵੀਂ ਜਮਾਤ ਦੇ ਗਣਿਤ ਵਿਸ਼ੇ ਦੀ ਚੈਪਟਰ ਵਾਈਜ਼ Test–Series ਤਿਆਰ ਕੀਤੀ ਗਈ ਹੈ। ਇਸ ਨੂੰ ਅਧਿਆਪਕ ਵਰਗ ਅਤੇ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਸਹੂਲਤ ਲਈ www.ssapunjab.org ਦੀ website ਤੇ ਅਪਲੋਡ ਕੀਤਾ ਜਾ ਰਿਹਾ ਹੈ।

3. ਇਸ ਤੋਂ ਪਹਿਲਾਂ ਬਾਰ੍ਹਵੀਂ ਜਮਾਤ ਦੀ ਚੈਪਟਰ ਵਾਈਜ਼ Test–Series www.ssapunjab.org ਦੀ website ਤੇ ਪਹਿਲਾਂ ਹੀ ਮਿਤੀ 25-10-2018 ਨੂੰ ਅਪਲੋਡ ਕੀਤੀ ਜਾ ਚੁੱਕੀ ਹੈ।

ਨੱਥੀ:

1) Test Series ਗਿਆਰ੍ਹਵੀਂ (ਗਣਿਤ)

ਡਾਇਰੈਕਟਰ

ਐਸ.ਸੀ.ਈ.ਆਰ.ਟੀ., ਪੰਜਾਬ।

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- SETS

M.M. 25 **Class: XI** **Time: 1 hour**

PART-A (Each question carries 1 mark)

1. If A and B are two disjoint sets then $n(A \cap B)$ is equal to .....
2. Write (-7, 0] in set builder form.
3. Write {x: x is a prime number and divisor of 6} in roster form.
4. Write the number of subsets of a set containing 3 elements.
5. Write the powers set of $\emptyset$ $(empty\ set)$.

PART-B (Each question carries 4 mark)

6. If A={3,5,7,9,11}, B={7,9,11,13}, C={11,13,15} and D={15,17}
   Find (i) $A \cup B$ (ii) $A \cup B \cup C$ (iii) $A \cap B$ (iv) $A \cap B \cap C$
7. In a class of 35 students, 17 have taken mathematics, 10 have taken mathematics but not economics. Find the number of students who have taken both mathematics and economics and the number of students who have taken economics but not mathematics, if it is given that each student has taken either mathematics or economics or both.
8. Prove that $(A \cup B) - C = (A - C) \cup (B - C)$
9. In a survey of 25 students, it was found that 15 had taken Mathematics, 12 had taken Physics and 11 had taken Chemistry, 5 had taken Mathematics and Chemistry, 9 had taken Mathematics and Physics, 4 had taken Physics and Chemistry and 3 had taken all three subjects. Find the number of students that had taken
   (a) Physics and Chemistry but not Mathematics
   (b) At least one of the three subjects
10. If U={1,2,3,...,9}, A={1,2,3,4}, B={2,4,6,8} and C={3,4,5,6}
    Find (i) $(A \cup B)'$ (ii) $(B - C)'$

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- RELATIONS & FUNCTIONS

M.M. 25 **Class: XI** **Time: 1 hour**

PART-A (Each question carries 1 mark)

1. If $(x+1, y-2) = (3,1)$, find the value of x and y.
2. If the set A has 3 elements and the set $B = \{3,4,5\}$, then find the number of elements in $A \times B$.
3. *If* $A \times B = \{(a,x),(a,y),(b,x),(b,y)\}$. Find set *A and B*.
4. A function f is defined by $f(x) = 2x - 5$. Write down the value of $f(-3)$.

PART-B (Each question carries 4 mark)

5. Let $A = \{1,2\}, B = \{1,2,3,4\}, C = \{5,6\}$, then verify that $A \times (B \cap C) = (A \times B) \cap (A \times C)$.
6. Find the domain and range of function $f(x) = \sqrt{9 - x^2}$.
7. Find the domain of function $f(x) = \frac{x^2+2x+1}{x^2-8x+12}$
8. If $f(x) = x^2$, then find $\frac{f(1.1)-f(1)}{(1.1-1)}$
9. Determine the domain and range of the relation $R = \{(x, x+5): x \in \{0,1,2,3,4,5\}\}$.

Department of School Education, Punjab

SUBJECT: MATHEMATICS

SESSION: 2019-20

TEST-TRIGONOMETRY

Time: 40 minutes **Class: 11th** **M.M. 25**

PART-A (Each question carries 1 mark)

1. Radian measure of angle 105° equals :
   (A) $\frac{7\pi}{12}$ (B) $\frac{\pi}{12}$ (C) $-\frac{7\pi}{12}$ (D) *None of these*
2. If $A + B + C = 180^\circ$, then $\frac{\tan A+\tan B+\tan C}{\tan A \tan B \tan C}$ equals
   (A) $\tan A \tan B \tan C$ (B) 0 (C) 1 (D *None of these*
3. The angle between the minute hand and hour hand of the clock at 5:40 is:
   (A) 70° (B) 85° (C) 55° (D) *None of these*
4. $\cos 75^\circ$ equals:
   (A) $\frac{\sqrt{3}+1}{2\sqrt{2}}$ (B) $\frac{1-\sqrt{3}}{2\sqrt{2}}$ (C) $\frac{\sqrt{3}-1}{2\sqrt{2}}$ (D) $\frac{\sqrt{3}+1}{2}$
5. $sin^2 75^\circ - sin^2 15^\circ$ equals:
   (A) $\frac{\sqrt{3}}{2}$ (B) 0 (C) $\frac{1}{2}$ (D) 1

PART-B (Each question carries 2 mark)

6. Prove that $\frac{\cos 18^\circ - \sin 18^\circ}{\cos 18^\circ + \sin 18^\circ} = \tan 27^\circ$.
7. If the arcs of the same lengths in two circle subtends angle 65° and 110° at the centre, find the ratio of their radii.
8. Find the values of other five trigonometric function when $\cos x = -\frac{1}{2}$, x lies in III quadrant.
9. Prove that $\frac{\sin 5x - 2\sin 3x + \sin x}{\cos 5x - \cos x} = \tan x$
10. Find the general solution for the equation $\sin x + \sin 3x + \sin 5x = 0$.
11. Prove that $(\cos x - \cos y)^2 + (\sin x - \sin y)^2 = 4sin^2 \frac{x-y}{2}$

PART-B (Each question carries 4 mark)

12. *Prove that* $cos^2\alpha + cos^2(\alpha + 120^\circ) + cos^2(\alpha - 120^\circ) = \frac{3}{2}$
13. Prove that $\sin 10^\circ \sin 30^\circ \sin 50^\circ \sin 70^\circ = \frac{1}{16}$.

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- PRINCIPLE OF MATHEMATICAL INDUCTION

Time: 40 minutes **Class: 11th** **M.M. 20**

Prove the following by using Principle of Mathematical Induction:-

1. $1^2 + 2^2 + 3^2 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots + n^2 = \frac{n(n+1)(2n+1)}{6}$, $n \epsilon N$

2. $x^{2n} - y^{2n}$ *is divisible by* $x + y$ *for all* $n \epsilon N$.

3. $1.3 + 3.5 + 5.7 + \ldots\ldots\ldots\ldots\ldots\ldots + (2n-1)(2n+1) = \frac{n(4n^2+6n-1)}{3}$, $n \epsilon N$.

4. *For every positive integer* n, *prove that* $7^n - 3^n$ *is divisible by* 4.

5. $\frac{1}{1.4} + \frac{1}{4.7} + \frac{1}{7.10} + \ldots\ldots\ldots\ldots\ldots\ldots + \frac{1}{(3n-2)(3n+1)} = \frac{n}{3n+1}$, $n \in N$.

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- COMPLEX NUMBERS

Time: 1 hour **Class: 11th** **M.M. 25**

1. *Write Conjugate of* $-1-i$. 1
2. *Write additive inverse of* $3-2i$. 1
3. *Find value of* $1+i+i^2+i^3$ 1
4. *Find modulus and argument of* $\frac{1+2i}{1-3i}$ 2
5. *If* $\left(\frac{1+i}{1-i}\right)^m = 1$, *then find the least* $+ve$ *integral value of* m. 2
6. *Find the real numbers* x *and* y *if* $(x-iy)(3+5i)$ *is the conjugate of* $-6-24i$. 2
7. *Write* $1-i$ *in polar form.* 2
8. *Evaluate* $\left[i^{18}+\left(\frac{1}{i}\right)^{25}\right]^3$ 2
9. (i) *If* $z_1 = 2-i, z_2 = -2+i$, *Find* $Re\left(\frac{z_1 z_2}{z_1}\right)$

   (ii) *If* $(x+iy)^3 = u+iv$, *then show that* $\frac{u}{x}+\frac{v}{y} = 4(x^2-y^2)$ 3+3=6
10. (i) *Find square root of* $5-12i$

    (ii) *Solve:* $x^2-x+1+i=0$ 3+3=6

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- LINEAR INEQUALITIES

Time: 40 mintues **Class: XI** **M.M. 24**

1. Solve : $3x - 7 > 2(x - 6), 6 - x > 11 - 2x$

2. Solve : $\frac{3(x-2)}{5} \leq \frac{5(2-x)}{3}$

3. Solve the inequalities graphically: $x + 4y \leq 60, x + 3y \leq 30,\ x \geq 0, y \geq 0$

4. Solve the inequalities graphically: $x - 2y \leq 3, 3x + 4y \geq 12, x \geq 0, y \geq 1$

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- PERMUTATIONS AND COMBINATIONS

Time: 1 hour **Class: 11th** **M.M. 25**

SECTION A (one mark each)

Q1.

I. Find 10!

II. If ${}^{n}_{10}C = {}^{n}_{12}C$. Then find the value of n.

III. Write the value of ${}^{500}_{1}C$.

IV. What is the value of 0!

V. How many 4 digits numbers can be formed by using the digits 1 to 8 if the digit can be repeated?

SECTION B (4 marks each)

Q2. Find r if ${}^{10}_{r}P = 42\ {}^{10}_{r-2}P$ where $r \geq 2$

Q3 In how many ways can 10 girls and 4 boys be seated in a row so that no two boys are together?

Q4 A bag contains 9 black and 10 red balls. Determine the number of ways in which 6 black and 7 red balls can be selected.

Q5 How many words of the letters of the word PERMUTATION can be formed with or without meaning?

Q6 In how many ways can a student choose a program of 6 courses if 11 courses are available and 4 specific courses are compulsory for every student?

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- BINOMIAL THEOREM

Time: 1 hour **Class: 11th** **M.M. 26**

Note: Each question from 1 to 11 carries 2 marks and question 12th carries 4 marks.

1) Expand $\left(x+\frac{1}{x}\right)^6$ using binomial theorem.

2) Using binomial theorem, indicate which term is larger $(1.2)^{4000}$ *or* 800.

3) Using binomial theorem, evaluate $(96)^3$.

4) Find the 4th term in the expansion of $(x-2y)^{12}$.

5) Find the coefficient of x^5 in the expansion of $(x+3)^8$.

6) Find the term independent of x in the expansion of $\left(x^2+\frac{1}{x}\right)^9$.

7) Find $(a+b)^4-(a-b)^4$ using binomial theorem.

8) Find the general term in the expansion of $(x^2-yx)^{12}, x\neq 0$.

9) Find a if the 17th and 18th term of the expansion $(2+a)^{50}$.

10) Find the middle term(or terms) in the expansion of $\left(3-\frac{x^3}{6}\right)^7$.

11) Find the coefficient of a^5b^7 in $(a-2b)^{12}$.

12) Find a, b, n in the expansion $(a+b)^n$, if the first three terms of the expansion are 729, 7290 and 30375 respectively.

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- SEQUENCE AND SERIES

Time: 40 minutes **Class: 11th** **M.M. 25**

Part-A(One mark each)

1. Sum of n odd numbers is
   (A) $2n$ (B) n^2 (C) $\frac{n(n-1)}{2}$ (D) $\frac{n(n+1)}{2}$
2. If third term of an A.P. is 12 and seventh term is 24, then the 10^{th} term is
   (A) 36 (B) 39 (C) 30 (D) 33
3. If a, b, c are in A.P., then $(a + 2b - c)(2b + c - a)(c + a - b)$ equals to
   (A) $\frac{abc}{2}$ (B) abc (C) $2abc$ (D) $4abc$
4. Product of three G.M.'s between 4 and $\frac{1}{4}$ is
   (A) 4 (B) 2 (C) -1 (D) 1
5. If third term of G.P. is 4, then product of first five terms is
   (A) 4^3 (B) 4^5 (C)4^4 (D) 4^2

Part-B(Four mark each)

6. How many terms of A.P. $-6, -\frac{11}{2}, -5, \ldots$ are needed to give the sum -25?
7. If A.M. and G.M. of two positive numbers a and b are 10 and 8 respectively. Find the numbers.
8. Find the value of n so that $\frac{a^{n+1}+b^{n+1}}{a^n+b^n}$ may be geometric mean a and b.
9. Let the sum of $n, 2n, 3n$ terms of an A.P. be S_1, S_2, S_3 respectively. Show that $S_3 = 3(S_2 - S_1)$.
10. The sum of first four terms of an A.P. is 56 and Sum of last four last terms is 112. If its first term is 11, then find the number of terms.

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- STRAIGHT LINES

Time: 40 minutes **Class: 11th** **M.M. 25**

Part-A(One mark each)

1. The angle between the equations $2x - y + 3 = 0$ and $x + 2y + 6 = 0$ is

   (A) 90° (B) 0° (C) 60° (D) 45°

2. Slope of the line which cut off equal intercept on the +ve direction of axes is :

   (A) 1 (B) -1 (C) 2 (D) 0

3. The distance of the point (-1, 1) from the line $5x + 3y + 6 = 0$ is

   (A) 2 units (B) 4 units (C) $4/34$ units (D) $4/\sqrt{34}$ units

4. The value of k for which the lines $2x + 3y + 6 = 0$ and $kx + 2y + 7 = 0$ are perpendicular to each other is :

   (A) -2 (B) 3 (C) -3 (D) 2

5. The slope of the line $4x + 3y + 7 = 0$ is

   (A) $3/4$ (B) $-4/3$ (C) $4/3$ (D) $-3/4$

Part-B(Four mark each)

6. If points $(a, b), (h, 0)$ *and* $(0, k)$ are collinear, then show that $\frac{a}{h} + \frac{b}{k} = 1$

7. Find the equation of the line perpendicular to the line $x - 7y + 5 = 0$ and passing through the point (5, -3).

8. Find the co-ordinates of the foot of the perpendicular from the point (-1, 3) to the line $3x - 4y - 16 = 0$

9. Find the equation of the line passing through the intersection of the lines $4x + 7y - 3 = 0$ and $2x - 3y + 1 = 0$ and passing through point (5, 2)

10. In what ratio, the line joining (-1, 1) and (5, 7) is divided by the line $x + y = 4$?

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- CONIC SECTIONS

Time: 40 minutes **Class: 11th** **M.M. 25**

Part-A (One mark each)

1. Length of Latus rectum of the hyperbola $\frac{x^2}{9}-\frac{y^2}{16}=1$ is :
   (a) $4/3$ (b) $3/4$ (c) $32/3$ (d) $9/16$
2. Foci of the ellipse $9x^2+4y^2=36$ are
   (a) $(\pm 5, 0)$ (b) $(0, \pm 5)$ (c) (0, -5) (d) (-5, 0)
3. The equation of the parabola with focus (0, 3) and vertex (0, 0) is :
   (a) $y^2=12x$ (b) $x^2=12y$ (c) $x^2=-12y$ (d) $y^2=-12x$
4. Equation of the circle having center (5, 3) and radius 6 is :
   (a) $x^2+y^2=36$ (b) $(x-5)^2+(y-3)^2=0$ (c) $(x-5)^2+(y-3)^2=36$ (d) $(x-5)^2+(y-3)^2=6$
5. Radius of the circle $x^2+y^2-8x+10y-12=0$ is
   (a) 53 (b) $\sqrt{53}$ (c) $\sqrt{176}$ (d) $\sqrt{29}$

Part-B (Four mark each)

6. Find the equation of a parabola with vertex (0, 0) and passing through point (5, 3) with symmetry along y axis.
7. Find the equation of the ellipse whose vertex are $(\pm 13, 0)$ and foci are $(\pm 5, 0)$
8. Find the equation of the hyperbola with vertices $(0, \pm 6)$ and eccentricity $5/3$
9. In the given parabola $y^2=10x$, find the co-ordinates of focus, eq. of directrix, vertex, length of Latus-rectum.
10. Find the equation of a circle passing through points (2, 3) and (-1, 1) and whose centre lies on the line $x-3y-11=0$

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- THREE DIMENSIONAL GEOMETRY

Time: 30minutes **Class: XI** **M.M. 10**

Note: ***Each question carries 2 mark***

1. Find the ratio in which the yz-plane divides the line joining the points $(-2,4,7)$ *and* $(3,-5,8)$.
2. Show that the points $(-2,3,5),(1,2,3)$ *and* $(7,0,-1)$ are collinear.
3. Show that $(0,7,10),(-1,6,6)$ *and* $(-4,9,6)$ are vertices of a right angled triangle.
4. Find the equation of the set of all points which are equidistant from the points $(1,2,3)$ *and* $(3,2,-1)$.
5. Find the coordinates of the point which divides the line segment joining the points $(1,-2,3)$ *and* $(3,4,-5)$ in the ratio 2: 3 (i) internally (ii) externally.

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- LIMIT AND DERIVATIVES

Time: 1 hour **Class: 11th** **M.M. 25**

1. Find $\lim_{y\to 0} \frac{sin8y}{tan\ 5y}$ 1
2. Find $\lim_{x\to 0} \frac{2^x-1}{x}$ 1
3. Find derivative of $\sqrt{x}$ 1
4. Find derivative of $x sin\ x$ from the first principle. 4
5. Find $\lim_{x\to 0} \frac{\tan x-\sin x}{x^3}$ 4
6. Evaluate $\lim_{x\to 0} \frac{5^x-1}{\sqrt{4+x}-2}$ 4
7. Evaluate $\lim_{x\to 3} \frac{x-3}{|x-3|}$ 4
8. (i) Find derivative of $sin(x^2+1)$ using first principle.
   (ii) Find $\lim_{x\to 0} \frac{x(e^x-1)}{1-\cos x}$ 3+3=6

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- MATHEMATICAL REASONING

Time: 40 MINUTES **Class: 11th** **M.M. 25**

1. Which of the following sentences are statements
   (i) Mathematics is difficult
   (ii) There are 40 days in a month.
2. Write negation
   (i) Both the diagonals of a rectangle have the same length.
   (ii) $\sqrt{5}$ is rational.
3. Write the component statement
   "All prime numbers are either even or odd"
4. Write the contra positive statement of the statement:
   "If x is a prime number, then x is odd"
5. Check whether the given statements are negation of each other or not?
   (i) $x + y = y + x$ is true for every real number x *and* y
   (ii) There exists real numbers x *and* y for which $x + y = y + x$
6. Write the converse
   "If two integers a and b are such that a>b, then a-b is always a positive integer"
7. Write the statement by using if and only if
   p: If a rectangle is a square, then all of its sides are equal
   q: If all the four sides of a rectangle are equal, then the rectangle is a square.
8. Rewrite the statement by using the word necessary and sufficient:
   "The integer n is odd if and only if n^2 is odd"
   Also Check whether the statement is true or not
9. Given below are two statements:
   p: 25 is a multiple of 5
   q: 25 is a multiple of 8

Write the compound statement connecting these two statements with 'and' , 'or'. In both cases check the validity of the compound statement.

10. Write the statements in three different ways having the same meaning :
    p: If a triangle is equiangular, then it is an obtuse angled triangle.
11. Show that the statement
    p: If x is a real number such that $x^3 + 4x = 0$, then x is 0 is true by direct method.
12. Verify by method of contradiction "$\sqrt{7}$ is irrational"

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- STATISTICS

Time: 40 minutes **Class: 11th** **M.M. 24**

1. Calculate the mean deviation about median for the following data:

Class	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	6	7	15	16	4	2

2. Calculate the mean, variance and Standard deviation for the following distribution:

Class	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Frequency	3	7	12	15	8	3	2

3. Calculate the mean and S.D. using short cut method for the following data:

x	60	61	62	63	64	65	66	67	68
f	2	1	12	29	25	12	10	4	5

4. Calculate M.D. about mean for the following data:

x	5	10	15	20	25
f	7	4	6	3	5

Department of School Education, Punjab

SUBJECT: MATHEMATICS

TEST- PROBABILITY

M.M. 25 **Class: XI** **Time: 1 hour**

PART-A (Each question carries 1 mark)

1. Write the sample space when a coin is tossed three times.
2. What is the probability of an impossible event?
3. If $w_1, w_2, \ldots, w_n$ are n events of a sample space S, then what is the value of $\sum_{i=1}^{n} P(w_i)$?
4. If A and B are two events such that $P(A) = 0.54, P(B) = 0.69$ *and* $P(A \cap B) = 0.36$, then what is the value of $P(A \cup B)$?
5. One card is drawn from a well shuffled deck of 52 cards. If each outcome is equally likely, what is the probability that card will not be a black card?

PART-B (Each question carries 4 mark)

6. If X, Y and Z are three events associated with a random experiment. Then prove that
$$P(X \cup Y \cup Z) = P(X) + P(Y) + P(Z) - P(X \cap Y) - P(Y \cap Z) - P(X \cap Z) + P(X \cap Y \cap Z).$$
7. In a certain lottery, 100000 tickets are sold and 100 equal prizes are awarded. What is the probability of not getting a prize if you buy
   (a) one ticket (b) two tickets (c) 100 tickets ?
8. A committee of three persons is to be selected from three men and three women. What is the probability that committee will have
   (a) no man (b) one man (c) three men?
9. Find the probability that when 6 cards are drawn from a well shuffled deck of 52 cards, it contain
   (a) all kings (b) 3 kings (c) at least 3 kings
10. A bag contains 15 discs of which 5 are red, 6 are blue and 4 are yellow. The discs are similar in shape and size. A disc is drawn at random from the bag. Calculate the probability that it will be
    (a) Red (b) yellow (c)blue (d) not blue (v)either red or blue