Q. 1  Do as directed:  (10)

i)  Make two compound sentences.

________________________________________________________________________

ii) Write down one sentence of First conditional and one of third conditional.

________________________________________________________________________

iii) Make two passive sentences.

________________________________________________________________________

iv) Make two sentences of perfect continuous tenses.

________________________________________________________________________

v) Make one sentence each using ‘who’ and ‘whom’ as relative pronouns.

________________________________________________________________________
vi) Make two negative sentences of the Past Indefinite Tense.

________________________________________________________________________

________________________________________________________________________

vii) Make one imperative (positive) and one imperative (negative) sentence.

________________________________________________________________________

________________________________________________________________________

viii) Make two exclamatory sentences using what & how.

________________________________________________________________________

________________________________________________________________________

ix) Use the past participle from of the verb in two sentences.

________________________________________________________________________

________________________________________________________________________

x) Write down one sentence each using comparative and superlative degrees of adjective.

________________________________________________________________________

________________________________________________________________________

Q. 2 Correct five (5) errors in the following passage (two spellings, two preposition, one punctuation).

Arabia is a land of unparalleled charm and beauty. It’s stary sky has excited the imagination of poets. It was on this land that the Holy Prophet (PBUH&HP) was born, in the city of Makkah, which is about fifty miles of the Red Sea.

________________________________________________________________________

________________________________________________________________________

Q. 3 Translate the following into English:

(5)
Q.1 NaCl is called a formula unit and H₂O₉ molecule. (3)

________________________________________________________________________

________________________________________________________________________

Q.2 Explain Avogadro Numbers and moles with examples. (3)

________________________________________________________________________

________________________________________________________________________

Q.3 NaCl is weighed 3 g. How many moles are present in 3 g NaCl. (3)

________________________________________________________________________

________________________________________________________________________

Q.4 We have 3 X 10^{15} formula units of CaCO₃. How many moles are present in it? (3)

________________________________________________________________________

________________________________________________________________________

Q.5 The cooking time is prolonged at Murree hills. Why? (3)

________________________________________________________________________

________________________________________________________________________

Q.6 Why Nascent Hydrogen is more reactive than molecular Hydrogen? (3)

________________________________________________________________________
Q. 7  Diamond is non-conductor of electricity, why? (3)

Q. 8  How HNO3 is prepared in the laboratory? (3)

Q. 9  Why solvay process is used for? (3)

Q. 10  How many types of carbohydrates? Name them. (3)

Q. 11  What is the different of boiling point? (3)

Q. 12  What is the composition of your dress worn by you? (3)
USWA COLLEGE ISLAMABAD

Class XI
Paper Physics

Time Allowed: 30 Minutes
Total Marks: 30

Name: __________________________ Father’s Name: __________________________
Roll No. _________________________ Group: _____________________________

Q.1 Encircle the correct option: (18 X 1=18)

i) The momentum of a body of 5 g moving with velocity of 60 ms\(^{-1}\) is
   (a) 0.3 Nm  (b) 0.3 kgms\(^{-1}\)  (c) 0.3 kgm\(^{-2}\)  (d) 30 kgms\(^{-2}\)

ii) A satellite revolving around the Earth in a circular orbit – if radius of orbit is increased from R to 3R what will be its velocity
   (a) \( V^3 \)  (b) \( \frac{V}{\sqrt{2}} \)  (c) \( \frac{V}{\sqrt{3}} \)  (d) 3v

iii) In terms of Wavelength the distance between two consecutive nodes is
   (a) \( \Lambda \)  (b) \( \frac{\Lambda}{2} \)  (c) \( \frac{\Lambda}{4} \)  (d) 2\( \Lambda \)

iv) \( 1 \text{ ev} = \)
   (a) \( 1.6 \times 10^{-19} \text{V} \) (b) \( 1.6 \times 10^{-19} \text{CV} \)  (c) \( 1.6 \times 10^{-19} \text{C} \)
   (d) \( 9.1 \times 10^{-31} \text{J} \)

v) If half life of Krypton how much will be left after 9.48 minutes
   (a) 1000g  (b) 250  (c) 500g  (d) 125g

vi) The frequency of Alternating voltage used in our daily life appliances is
   (a) 15 Hz  (b) 20 Hz  (c) 30 Hz  (d) 50 Hz

vii) The fission of \( U^{238} \) is possible by
   (a) Fast proton  (b) Only slow neutrons  (c) Only fast neutrons
   (d) Fast as well as slow neutrons

viii) If a wooden block of 1.5Kg is pushed on smooth surface by a force of 6N the acceleration is . . . . . . . . . . . ms\(^{-2}\)
   (a) 5  (b) 6  (c) 4  (d) 3

ix) Work done by a force of 500N at angle of 60° to a distance of 5m is
   (a) 1000 J  (b) 11000 J  (c) 1250J  (d) 1200J
x) The focal length of a lens is 2m then its power will be . . . . . . . . Diopter
   (a) 2  (b) 1  (c) 0.5  (d) .025

xi) Which of following quantities has same units as that of young’s modulus
   (a) Strain   (b) Elastic Limit   (c) Stress

xii) Viscosity of which will be maximum
    (a) Water at 20 °C   (b) Water at 90 °C   (c) Honey at 20 °C
    (d) None of these

xiii) When water changes into ice it
      (a) Contracts  (b) Expands  (c) Becomes dense
      (d) Remain same

xiv) The pitch of sound depends upon
     (a) Frequency  (b) Area of vibrating body  (c) Intensity of sound
     (d) Amplitude of vibrating body

xv) If the image is virtual then its distance from lens is taken
    (a) Positive  (b) Negative  (c) Double  (d) Half

xvi) The instrument which stores charge
     (a) Conductor  (b) Electroscope  (c) Capacitor
     (d) Capacitance

xvii) β particles are actually
      (a) Proton  (b) Neutrons  (c) Electrons  (d) Nucleons

xviii) The unit of current is
       (a) Volt  (b) Farad  (c) Ampere

Q.2 Attempt any 4 of the following: (4 X 3=12)

i) Define Geostationary satellites

ii) The length of racing car is kept small why?

iii) What is potential barrier?

iv) Define resistance. What are factors upon which resistance of conductor depend?

v) What are difficulties to control fusion reaction?

vi) What is doping? Name its types.
Q.1 Choose the correct answer and encircle it: (30 X 1 = 30)

i) What is the solution set if $|3x + 2| + 3 = ?$
   (a) $\{-1\}$   (b) $\{-7/5\}$   (c) $\{7/5\}$   (d) $\{\}$

ii) $Ax + b = 0$ is a _____________ equation.
   (a) Linear   (b) Quadratic   (c) Radical   (d) Cubic

iii) Eliminating ‘t’ from $t = \frac{1}{4q^2}$ and $3p^2 = \frac{1}{t}$, we get
   (a) $3p^2q^2 = 4$   (b) $12p^2q^2 = 1$   (c) $3p^2 = 4q^2$   (d) $4p^2 = 3q^2$

iv) Eliminating ‘x’ from $x^2 + \frac{1}{x^2} = m^2$ and $x + \frac{1}{x} = n$ we get
   (a) $m^2 - n^2 = 2$   (b) $m^2 + n^2 = 2$   (c) $m^2 - n^2 = 2$   (d) $m^2 - n^2 = -2$

v) If $a:b = b:d$, then invertendo theorem will be
   (a) $a:b = b:d$   (b) $a+b:b=c+d:d$   (c) $b:d=a:b$   (d) $a+b:a-b=c+d:a-d$

vi) The coding formula of arithmetic mean for group data is
   (a) $\overline{X} = A + \frac{\Sigma fD}{\Sigma f}$   (b) $\overline{X} = A + \frac{\Sigma U}{f} \times h$   (c) $\overline{X} = A + \frac{\Sigma fU}{\Sigma f} \times h$
   (d) $\overline{X} = A \times h + \frac{\Sigma fU}{\Sigma f} \times h$

vii) Following are the lengths of 12 students, then the median is
   55, 53, 54, 58, 60, 61, 62, 56, 57, 52, 51, 63
   (a) 55   (b) 55.5   (c) 56   (d) 56.5
viii) From a point outside a line ___________ is the shortest distance
   (a) Parallel       (b) Per Pendicular      (c) Tangent       (d) Secant

ix) A circle touching the three sides of a triangle is called___________
   (a) Ascribed circle       (b) Inscribed circle      (c) Circumincle       (d) Median

x) \( \sin 60^\circ \cos 30^\circ - \cos 60^\circ \sin 30^\circ = \) ________________
   (a) \( \frac{1}{2} \)       (b) \( \frac{\sqrt{3}}{2} \)       (c) 1       (d) 0

xi) A tangent is a line touching a circle at
   (a) Two points       (b) One point       (c) Three points       (d) No point

xii) The monthly attendance of 10 students for their lunch in the hostel is recorded as
     21, 15, 15, 16, 18, 14, 17, 12, 13, 11 then the mode of the data is
     (a) 21       (b) 11       (c) 15       (d) No mode

xiii) The proper mean formula of variance is
     (a) \( S^2 = \frac{(x-\overline{x})^2}{n} \)       (b) \( S^2 = \frac{\sum(x-\overline{x})^2}{n} \)       (c) \( S^2 = \frac{\sum(x-\overline{x})^2}{n} \)       (d) \( S^2 = \frac{\sum(x^2-\overline{x})}{n} \)

xiv) \( \tan (90^\circ - \theta)^n = \) ________________
     (a) \( \cot \theta \)       (b) \( \sec \theta \)       (c) \( \cosec \theta \)       (d) \( \tan \theta \)

xv) \( 1 + \cosec^2 \theta = \) ________________
     (a) \( \cot^2 \theta \)       (b) \( \sin^2 \theta \)       (c) \( \cos^2 \theta \)       (d) \( \tan^2 \theta \)

xvi) The solution set of \( \sqrt{x} + 3 = 2 \) is
     (a) \( \{-1\} \)       (b) \( \{+1\} \)       (c) \( \{\pm1\} \)       (d) \( \{ \} \)

xvii) A set of all points of a plane equidistant from a fixed point is called a ___________
     (a) Triangle       (b) Circle       (c) Square       (d) Tangent

xviii) The set with infinite number of elements is called as
     (a) Empty set       (b) Finite Set       (c) Infinite set       (d) Sub set

xix) The range of \{ (1,0), (2,1), (4,3) \} is
     (a) \{ 2, 3, 4 \}       (b) \{ 0,1,3 \}       (c) \{ 1,2,4 \}       (d) \{ 1,2,3 \}

xx) If \( x = 4 - \sqrt{17} \), then \( \frac{1}{x} = \) ________________
xxi) \( \log_{\frac{m}{n}} = \) _______________

(a) \( \log_{\frac{m}{n}} \) (b) \( \log_{\frac{n}{m}} \) (c) \( \log_{n} \) (d) \( \log_{m} \)

xxii) \( 2 \log x - 3 \log y \) in the form of single logarithm is

(a) \( \log x^2 + \log y^3 \)  (b) \( \log x^2 - \log y^3 \) (c) \( \log x^2 y^3 \) (d) \( \log \frac{x^2}{y^3} \)

xxiii) \[ \begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix} \] is a ___________ matrix

(a) Zero (b) Identity (c) Rectangular (d) Scalar

xxiv) Factors of \( 5x^2 - 17xy - 12y^2 \) are

(a) \( (x + 4y)(5x + 3y) \) (b) \( (x - 4y)(5x - 3y) \) (c) \( (x - 4y)(5x + 3y) \) (d) \( (5x + 4y)(x + 3y) \)

xxv) Which is an open sentence..?

(a) \( 3 > 2 \) (b) \( x + 2 = 3 \) (c) \(-3 < -8 \) (d) \( 3 < 7 \)

xxvi) Eliminating ‘y’ form \( y = 2t \) \& \( y = \frac{1}{2x} \), we get

(a) \( 4s = t \) (b) \( 4t = s \) (c) \( 4ts = 1 \) (d) \( ts = 4 \)

xxvii) If \( x : 5 = 4 : 2 \) then \( x = \) ________________

(a) 8 (b) 10 (c) 20 (d) 2

xxviii) The third proportional of \( a^2 \) and \( b \) is

(a) \( ab \) (b) \( \frac{a}{b} \) (c) \( \frac{a^2}{b^2} \) (d) \( a^2 b^2 \)

xxix) \( \cot 30^\circ = \) _________________

(a) \( \frac{1}{2} \) (b) 2 (c) \( \frac{1}{\sqrt{3}} \) (d) \( \sqrt{3} \)

xxx) Any sentence which contains two conditions is called ________________

(a) Algebraic expression  (b) Quadratic equation  (c) Compound sentence

(d) Open Sentence
Q.1  Solve any 10 questions. Be targeted in your answer according to points (10 X 3= 30) asked in questions. Don’t write extra things which are not asked otherwise marks will deducted. Draw and label the diagrams where instructed to draw.

i)  It has been observed that dominant genotype is difficult to know even you know the phenotype of that genotype. What is name of process by which genotype of dominant phenotype is calculated mathematically. Prove by example by considering the Tall phenotype of pea plant as explained by Mendal. Verify your result by checker Board?

ii) Draw and label the diagram of Nitrogen cycle by mentioning the antagonistic action of Nitrification and denitrifying bacteria? How the Nitrogen is absorbed by Family Leguminosae plant? Which type of bacteria is making adverse effects of farmers efforts?

iii) It has been practically that to eat the producers directly energy is gained more as compared to energy gained by eating consumers. Explain this reason by considering the food chain of ecosystem?

iv) How the single cell protein is prepared. What is apparatus in which microorganisms are used to prepare single cell protein? Why single cell protein is more useful in diet and how this protein can deal with problem of starvation in future?

v) Draw the labeled diagram of Nephron and different the types of renal tubules in terms of its functions?

vi) Where and when and in which living thing double fertilization takes place? How this double fertilization will form zygote and endosperm? explain with diagrams.

vii) Explain how the bicep and triceps are antagonistic?

viii) Differentiate between continuous and discontinuous variations with examples.

ix) How you will explain the blood groups genetically be mentioning the genotypes of B,A and O blood group. Which gene is dominant in AB blood group? What is name of process which is used to explain the genotype of AB blood groupd?

x) Explain the binary fissions in Bacteria by examples?


xii) Draw the labeled diagram of Human respiratory system?

xiii) Explain the food storing structures in the seed?
اسؤف کا عالم آباد
انسیم قمی۲۰۱۸
پاکستان

کل نمبر۳۶۰۰ وقتمہ میں

سوال نمبر۱ - درج نزلی اشاعشیئے‌ کی لکھی شعری افسعز کے مفت ذکر کی جانی کا کہا دی جا تا ہے۔

امر حساب تہے، گل نیا شاک من سند کیا
میس کے جھلک کی آتجھی کی باتی تی بہت سے۔
ب. شکریہ سے کل پیچھے پڑوئے جرج کی ہلنی
دی پچھ دشنب پھیلی، مونی جیلوں پہلی

سوال نمبر۲ - لغتی افساہے کی کچھ اوران کا استعمال ممکن سے واقع کر کیا

سوال نمبر۳ - دبے لگے قدیم رست کر کی وجہ

ایک هائیٹی کا جاجہ کوہتے دیوتے تھا۔
ب. ایکچر دیما کا راحکر آگا تھا۔
ج. کلیات اقتال "پیچھا" سے۔

سوال نمبر۴ - چتر نطلسی کی وی ہجھا کی روک کے سیاہ کی تکمیل کی گئی

اہarris مکار
ب. ہند گلاب پہلے بھی۔
Section A

Q.1 Encircle one choice A, B, C or D in each case. 

1. Binary coded decimal (BCD) expresses each decimal digit as:-
   a) binary digit          b) byte          c) nibble          d) word

2. The number 1000 comes immediately after:-
   a) 900            b) FFF           c) 887            d) 499

3. The number of possible combinations in a 7-bit code are.
   a) 49          b) 64          c) 128          d) 256

4. Which of the following is a 16 bit code:-
   a) BCD        b) Unicode     c) ASCII     d) EBCDIC

5. In floating point representation, mantises is kept less than:-
   a) 2        b) 1          c) 4          d) 3

6. First generation languages use:-
   a) Pseudo code     b) Binary code   c) Mnemonic code   d) Decimal code

7. In which of the flowchart symbols, the statement “Is A > B” is placed?
   a) Connector    b) Rectangular   c) parallelogram   d) Diamond

8. Which of the following is not a part of planning stage?
   a) Developing algorithm    b) Flowcharting    c) Coding the program    d) Writing Pseudo code

9. Which of the following command is used to exit from BASIC.
   a) Clear    b) Kill         c) System       d) New

10. In Boolean algebra 1 + 1 + 1 is equal to:-
    a) 0      b) 3         c) 2         d) 1

11. Which of the following is not logical operator?
    a) AND       b) OR         c) FIX         d) NOT

12. Which of the following statements can be used for counter loop?
    a) GOTO    b) FOR NEXT    c) IF THEN         d) WHILE WEND
Section B
Marks = 18

Q.2 Write any 6 short questions of the following all questions carry equal marks.

1. Describe ASCII code and EBCDIC code.

2. What is Flowchart. What are its advantages?

3. What is difference between STOP and END statement. Give suitable example?

4. What is debugging? Why it is necessary to test or debug a program.

5. Define the terms Direct Mode and Program Mode used in BASIC programming.

6. What are conditional control loops? Give an example

7. Define One Dimensional Array with proper syntax.

8. What is the purpose of int Function in BASIC language.

9. What are sub-routine programs?