Ans.1.(a) 1. The Cash chest shall have a double locking system with two sets of keys for operating these locks. The keys shall be marked 1 & 2. Key No.1 shall be in the custody of RA/SDO/AO/Sr. Xen and key no. 2 shall be in the custody of official handling cash.

2. The duplicate Keys shall be deposited with the bank in a small box duly sealed by officer incharge. The fact should be entered in the Duplicate key Register.

3. At the begging of every year duplicate keys from the bank should be withdrawn and operate the duplicate keys in the presence of 2nd key holder and deposited the key in the bank as above.

4. The cash chest shall never be opened unless both custodians of keys are present till the time it is locked again.

5. Intimate Controlling Officer immediately in case of loss of keys of cash chest. In case, both keys are lost FIR with Police should be lodged.

6. Withdraw duplicate keys from the bank and arrange to get the lock changed from the company from whom the cash chest was purchased.

7. Deposit the new duplicate keys after lock is changed as per step-2 above.

8. In case the key holder is to go on tour/ leave, the key of cash chest should be handed over to next official in line under him. In such an eventuality. Cash Book should be balanced, cash in chest counted and recorded in the Particulars Column of the Cash Book under the signature of both officials handling over or taking over charge.

1 (B).  
1- 74.3  
2- 14.222/10.222  
3- 78.725  
4- 40.610  
5- 75.617
### Ans.2 (a)

(i) For Renewals and Replacement of existing works

<table>
<thead>
<tr>
<th>CEs</th>
<th>Rs. Full Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEs</td>
<td>Rs. 10,00,000</td>
</tr>
<tr>
<td>Xens/REs</td>
<td>Rs. 2,50,000</td>
</tr>
</tbody>
</table>

(ii) Special Repair

<table>
<thead>
<tr>
<th>CEs</th>
<th>Rs. Full Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEs</td>
<td>Rs. 2,50,000</td>
</tr>
<tr>
<td>Xens/REs</td>
<td>Rs. 1,00,000</td>
</tr>
</tbody>
</table>

### Ans.2 (b)

(i) For Renewals and Replacement of existing works

<table>
<thead>
<tr>
<th>CEs</th>
<th>Rs. 10,00,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEs</td>
<td>Rs. 7,00,000</td>
</tr>
<tr>
<td>Xens/REs</td>
<td>Rs. 2,50,000</td>
</tr>
</tbody>
</table>

(ii) Special Repair

<table>
<thead>
<tr>
<th>CEs</th>
<th>Rs. 5,00,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEs</td>
<td>Rs. 2,00,000</td>
</tr>
<tr>
<td>Xens/REs</td>
<td>Rs. 50,000</td>
</tr>
</tbody>
</table>
Ans. 3 (a) (1) REJECTION OF TENDERS:- As per provisions of Works Regulation 1997, the tenders of following type shall be rejected:-

1) Tenders from firms/contractors who are black-listed or with whom business dealings are suspended.
2) Tenders submitted by firms who did not purchase a set of tendering documents/specifications as required.
3) Tender submitted by a person directly or indirectly connected with service under the Government, Board or Local Authority.
4) Tenders not accompanied by the required amount of earnest money as per Regulation 12 (iv).

Ans. 3(a) (2) RE-INVITATION OF TENDERS:- As per provisions of Works Regulation tenders may be re-invited in the following cases/events by the Contracting/purchasing Agency after approval by the competent Authority.

(a) Any subsequent change necessitated in technical specification.
(b) Inadequacy of number of tenders.
(c) Unsuitability of offers.
(d) Pronounced changes in market trends, when it is felt that the rates of tenders received are too high.
(e) Any other compelling reasons to be recorded in writing.

Ans. 3 (b) DELEGATION OF POWERS

Delegation of Powers for accepting Open Tenders Limited Tenders and Single Tenders by the various committees constituted by the PSPCL shall be as under:-

<table>
<thead>
<tr>
<th>Competent Authority</th>
<th>Open Tenders</th>
<th>Limited Tenders</th>
<th>Single Tenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Board of Directors</td>
<td>Full Powers</td>
<td>Full Powers</td>
<td>Full Powers</td>
</tr>
<tr>
<td>(b) Whole Time Directors</td>
<td>Full Powers</td>
<td>Full Powers</td>
<td>Full Powers</td>
</tr>
<tr>
<td>(c) Central Purchase Committees/Project Purchase committees</td>
<td>Rs. 4 Crore</td>
<td>Rs. 2 Crore</td>
<td>Rs. 1 Crore</td>
</tr>
<tr>
<td>(d) Purchase committee (General)</td>
<td>Rs. 1 Crore</td>
<td>Rs. 40 lacs</td>
<td>Rs. 20 lacs</td>
</tr>
<tr>
<td>(e) Officers of the Board</td>
<td>In accordance with the powers delegated to them by the Board of Directors from time to time.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note:

(i) These powers are subject to relevant rules and regulations of the PSPCL.
(ii) Purchases are subject to availability of funds.
(iii) The Director In-charge is required to approve the Purchase proposals, and to give his/her specific views/recommendations, to be submitted to committee of WTDs/BODs for consideration and decision.
(iv) Competency to accept the Tenders will be determined with reference to NIT quantity/value.
(v) Prices will be include Taxes, duties & other allied costs for purpose of determining the competency to affect purchase.

Ans.3 (c) Delegation of powers

Delegation of Powers for accepting Open Tenders Limited Tenders and Single Tenders by the various committees constituted by the PSPCL shall be as under:

<table>
<thead>
<tr>
<th>Competent Authority</th>
<th>Open Tenders</th>
<th>Limited Tenders</th>
<th>Single Tenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Board</td>
<td>Full Powers</td>
<td>Full Powers</td>
<td>Full Powers</td>
</tr>
<tr>
<td>(b) Whole Time Directors (WTM)</td>
<td>Rs. 4 Crore</td>
<td>Rs. 2 Crore</td>
<td>Rs. 2 Crore</td>
</tr>
<tr>
<td>(c) Works Committee</td>
<td>Rs.1 Crore</td>
<td>Rs.40 lakh</td>
<td>Rs. 20 lakh</td>
</tr>
</tbody>
</table>
| (d) Officers of the Board | In accordance with the powers delegated to them by the Board of Directors from time to time.
Ans. 4 (a)

1. 22.712- Jobs in process
2. 72.210- Loss on Railway Claim for Coal.
3. 75.135- Salaries- Wc/Daily labourO&M
4. 10.331- Cooling Towers
5. 46.961- Provision for loss in obsolescence/Capital.

Ans.4 (b) (a) Rate Contract means Rate Contract entered into by the Director General of Supplies and Disposals/PSPCL/Punjab Government with the manufacturers of suppliers for supply of specific material or equipment.

Ans.4 (b) (b) Central purchase Committees

(i) The Committee comprising of CE/MM, FA-cum-CAO/ Procurement and Chief Purchase Officer with Chief Purchase Officer concerned as the Convener for procurement of Centrally Purchased items-except meters and metering equipments and workshop items.

(ii) The Committee comprising of CE/Metering FA-cum-CAO/Procurement and SE/Metering Patiala as Member/ convener for the purchase for meters and metering equipment.

(iii) The Committee comprising of Chief Engineer/Workshops, FA&CAO/Procurement and SE/TRW circle, PSEB Ludhiana, (SE/Purchase workshops) as Member/Convener for the Purchase of workshops items.
Ans.5 INFORMATION TO BE CONTAINED THE NOTICE INVITING TENDERS (NIT)

i) Brief description of work or service to be rendered. Scheduled of Quantities.
ii) Estimated cost of work, where practicable.
iii) Completion period.
iv) The basis on which prices shall be quoted whether (1) Lumpsum basis or (2) item rate basis or (3) on CSR basis.
v) The amount and Earnest Money required to be deposited by the tenderers. 

'Earnest Money' Shall be submitted in separate envelope on which the word Earnest Money' for tender against NIT/Specification No.__________ due for opening on __________/______ shall be clearly written.
vi) The name & address of the office and the days on which and the time when the tender specifications can be obtained.

vii) Whether tender documents/ specifications are required to be purchased by the tenderers and if so their cost (if any) and the form in which and with whom it is required to be deposited.

The cost of tender documents/specifications per copy shall be fixed having regard to the estimated cost of work/service generally as below-

<table>
<thead>
<tr>
<th>Slab</th>
<th>Cost Range</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Upto Rs. 50,000</td>
<td>Rs.10/-</td>
</tr>
<tr>
<td>ii)</td>
<td>Upto Rs. one Lac</td>
<td>Rs.50/-</td>
</tr>
<tr>
<td>iii)</td>
<td>Above Rs. one Lac and upto Rs.20Lacs</td>
<td>Rs.500/-</td>
</tr>
<tr>
<td>iv)</td>
<td>Above Rs. 20 Lac and upto Rs. one crore</td>
<td>Rs.1000/-</td>
</tr>
<tr>
<td>v)</td>
<td>Above Rs. one crore and upto Rs. 5crores</td>
<td>Rs.2000/-</td>
</tr>
<tr>
<td>vi)</td>
<td>Above Rs.5 crores</td>
<td>Rs.2500/-</td>
</tr>
</tbody>
</table>

Note:- In case it is not practicable to assess the estimated cost of work, the CE would fix the cost of tender documents specifications keeping in view the above slabs.
Ans 1(a) As per regulation 30 of GPF regulations, provisions regarding payment of GPF in case of death is as under:-

On the death of a subscriber before the amount standing to his credit has become payable or where the amount has become payable before payment has been made:

1) when the subscriber leaves the family

a) if a nomination made by the subscriber in accordance with the provisions of regulation 7 of GPF regulation in favour of member or members of his family subsist, the amount standing to his credit in the fund or the part thereof to which the nomination relates shall become payable to his nominee or nominees in the proportion specified in the nomination.

b) if no such nomination in favour of a member or members of the family of the subscriber subsist or if such nomination relates only to a part of the amount standing to his credit in the fund , the whole amount or the part thereof to which the nomination does not relate , as the case may be, shall, notwithstanding any nomination purporting to be in favour of any person or persons other than a member or members of his family become payable to the members of his family in equal share

c) provided that no share shall be payable to

1) sons who have attained legal majority

2) sons of a deceased son who have attained legal majority

3) married daughters whose husbands are alive

4) married daughters of a deceased son whose husband is alive

If there is any member of the family, other than those specified in clause (1) (2)( 3 )and( 4 )above

Provided further that the widow or widows and the child or children of a deceased son shall receive between them in equal part only the share
which that son would have received if he had survived and had been exempted from the provision of clause 1 of the first proviso.

ii) when the subscriber leaves no family, if nomination made by him in accordance with the provisions of regulation 7 of GPF regulation in favour of any person or persons subsist, the amount standing to his credit in the fund or the part there of to which the nomination relates shall become payable to his nominee or nominees in the proportion specified in the nomination.

Ans 1(b) The subscription towards provident fund is compulsory with effect from 01.10.68. The amount of subscription shall be fixed by the subscriber himself subject to the following conditions:
   a) it shall be expressed in whole rupees
   b) it shall be any sum so expressed, not less than 8% of his emoluments and not more than his total emoluments
   c) if the subscriber fails to fix the amount of subscription, Head of the office/DDO concerned shall fix the same in accordance with the provision of clause (a) and (b) above.

2. For the purpose of clause 1 the emoluments of a subscriber shall be:
   a) In the case of a subscriber who was in corporation services on the 31st March of the preceding year, the emoluments to which he was entitled on that date provided that:
      i) if the subscriber was on leave on the said date and elected not to subscribe during such leave or was under suspension on the said date, or the period of service on that day is treated as ' dies non ' his emoluments shall be the emoluments to which he was entitled on the first day after his return to duty
      ii) If the subscriber was on deputation out of India on the said date or was on leave on the said date and continuous to be on leave and has elected to subscribe during such leave his emoluments shall be the emoluments to which he would have been entitled had he been on duty in India.
      iii) if the subscriber joins the fund for the first time, his emoluments shall be the emoluments to which he was entitled on the date of joining the fund.

3. The subscriber shall intimate the fixation of the amount of his monthly subscription in each year to the drawing and disbursing officer or head of the office as the case may be.

Provided that on request of the subscriber the amount of subscription fixed under regulation 10 may be changed twice during the course of the year in the salary of April and October.
Ans 1(c) There is no provision in MSR to grant TA advance to the family of deceased and not covered under any rules but the competent authority may allow advance to family of deceased in special cases on the surety bond from permanent Corporation employee as per provision in CSR volume iii.

Ans 1(d) A corporation employee appeared before inquiring officer will be allowed only bus/ Railway fare of entitled class and not for mileage of car.

Ans 1(e) In order to enroll for NPS Tier 1 account, it is a mandatory account, where as Tier 2 is an optional. All the tax benefit available in NPS are associated to Tier 1 account only .No tax benefit is available to Tier 2. Tier 2 functions as a mutual fund as the withdrawal option is unlimited ,where as in Tier 1 withdrawal options are limited. Minimum contribution for Tier 1 is Rs 6000 and for Tier 2 is Rs 2000 per financial year.
Ans 2(a) Pay fixation of Mr Sunil is as under:

<table>
<thead>
<tr>
<th>Date</th>
<th>Pay</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.01.2012</td>
<td>28400</td>
<td></td>
</tr>
<tr>
<td>01.12.2012</td>
<td>29260</td>
<td>Annual increment</td>
</tr>
<tr>
<td>01.12.2014</td>
<td>29260(31050)</td>
<td></td>
</tr>
<tr>
<td>1.12.2016</td>
<td>32950</td>
<td></td>
</tr>
<tr>
<td>1.12.2017</td>
<td>33940</td>
<td></td>
</tr>
<tr>
<td>1.12.2018</td>
<td>34960</td>
<td></td>
</tr>
</tbody>
</table>

Ans 2(b)(i). When an employee submitted his resignation he can withdraw the same within 90 days from the date of resignation but he must submit his request 30 days before the completion of 90 days period. In this case he has submitted his request after 75 days he is not allowed to withdraw his resignation but competent authority can consider his request for withdrawal of resignation on the basis of merit of the case.

Ans 2(b)(ii) As per secretary regulations circular No 3/96, PSEB allowed maternity leave for miscarriage to women employees but the duration was restricted to 45 days during her entire service. In this case since the official has applied for maternity leave with effect from 01.06.2018 to 31.07.2018 that is 61 days which is exceeding the limit of 45 days. Therefore the action of sanctioning authority is correct and justified.

Ans 2(b)(iii) Neither refundable nor non-refundable is admissible for this purpose under provident fund regulation 2010.

Ans 2(b)(iv) Third non-refundable advance could not be sanctioned to an employee as required difference between two advances is 5 years and advance is admissible for addition and alteration and not for repair as per regulation 18(3).
Ans 3(a) The grounds on which order of punishment can be revised by the competent authority are following:

1) if the appellant authority is one other than PSPCL (earlier board) and

2) only on the ground of material irregularity in the proceedings of the inquiring or appellant authority or on the discovery of new and important matter of evidence, which after exercise of diligence was not within the knowledge of the petitioner, or could not be produced by him, when the order was made against him or on account of some mistake or errors apparent on the face of the record.

And 3(b)(i) As per employee conduct regulation no.23, a PSPCL employee shall:

1) strictly abide by any law relating to intoxicating drinks or drugs in force in any area in which he may happen to be for the time being;

2) take due care that performance of his duty is not affected in any way by the influence of any intoxicating drinks or drugs;

3) not appear in a public place in a state of intoxication;

4) not habitually use any intoxicating drinks or drugs to excess.

Ans 3(b)(ii) as per employee conduct regulation number 15, No PSPCL employee shall except with the previous sanction of the PSPCL receive any complementary for valedictory address or accept any testimonial or attend any meeting or entertainment held in his honour or in the honour of any other PSPCL employee;

Provided that nothing in this regulation shall apply to:

1) a Farewell entertainment of a substantially private and informal character held in honour of a PSPCL employee or any other PSPCL employee on the occasion of his retirement or transfer of any person who has recently quit the service of any PSPCL; or

2) the acceptance of simple and inexpensive entertainment arranged by public bodies or institutions.

Ans 3(c) The appointing authority or any other authority to which it is subordinate or the punishing authority or any other authority empowered in that behalf by the PSPCL by General or special order may place an employee under suspension:
i) where a disciplinary proceeding against him is contemplated or is pending; or

ii) where a case against in respect of any criminal offence is under investigation, enquiry or trial; Provided where the order of suspension is made by an authority lower than the appointing authority or any other authority empowered in that behalf by the PSPCL, such authority shall forthwith report to the appointing authority the circumstances in which the order was made.

Ans 3(d) Notwithstanding anything contained in this part no appeal shall lie against:

1) any order made by the PSPCL.

2) any order of an interlocutory nature or of the nature of step in aid of the final disposal of a disciplinary proceedings other than an order of suspension.

3) any order passed by an inquiring authority in the course of an enquiry under regulation 8.
Ans 4(a) As per serial number 3 of appendix of MSR volume 1 part 2 powers are as under:

<table>
<thead>
<tr>
<th>Serial number</th>
<th>Reference to regulation</th>
<th>Nature of power</th>
<th>Authority to which the power is delegated</th>
<th>Extent of power delegated</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>25</td>
<td>Power to sanction the absence of PSPCL employee from his headquarter and journey beyond sphere of his office duty</td>
<td>Head of Departments</td>
<td>Full power in individual cases provided the absence is for reason of a public nature which should be stated and does not exceed 60 days in each case</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S.E.</td>
<td>Full power in individual cases provided the absence is for reason of a public nature which should be stated and does not exceed 60 days in respect of employees under their control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dy C.A.</td>
<td>Full power in individual cases provided absence is for reason of a public nature which should be stated and does not exceed 60 days in respect of employees under their control. Dy.C.A./revenue and</td>
</tr>
</tbody>
</table>
Quarantine leave is a leave of absence from duty necessitated by orders to attend office in consequence of the presence of infectious disease in the family for household or a board employee. Such leave may be granted by the head of office on the certificate of a medical officer of public health officer for a period not exceeding 21 days or in exceptional circumstances 30 days. Any leave necessary for Quarantine purposes in excess of this period shall be treated as ordinary leave. Quarantine leave is subject to the above maximum except as provided in the note below, no substitute should be appointed in place of PSPCL employee absent on Quarantine leave.

- Cholera
- Smallpox
- Plague
- Diphtheria
- Typhus fever
- Leptospirosis
- Smallpox
- Typhoid fever
- Yellow fever
- Typhus fever
- Japanese encephalitis
- Measles
- Polio
- Scarlet fever
- Mumps
- Meningitis
- Rubella
- Leprosy
- Chagas disease
- HIV/AIDS
- Tuberculosis

For example, in the case of Chicken pox, Quarantine leave should not be sanctioned unless the health officer responsible considered that because of doubt as to the true nature of the disease, or in the case of Smallpox, employee stationed in areas under the administration of the other states, such other diseases which are considered as infectious, may be considered as infectious diseases for the purpose of this regulation. In the case of Chicken pox, Quarantine leave should not be granted when necessary in continuation of other leave.

The following table provides the powers in respect of A.O. / field and A.O. / works, and the employees responsible, to exercise these powers in the spirit of the contents of the regulations. The employees responsible for the administration of the other departments, such as the employees responsible for the administration of the other departments, should be stated and does not exceed 60 days in the spirit of the regulations.

<table>
<thead>
<tr>
<th>Xens/RE's</th>
<th>Full power in individual cases</th>
<th>Not responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.V.C.A. works</td>
<td>respectively</td>
<td>provided</td>
</tr>
</tbody>
</table>

And 4(b) As appendix VIII of MSR volume 1 part 2 provision regarding
government as infectious for the purpose of their Quarantine leave may also be considered as infectious diseases for the purpose of this regulation. Such PSPCL employee will however be eligible for Quarantine leave for any of the diseases mentioned above, even though it has not been declared in orders issued by other states concerned to be an infectious disease.

Ans 4(c) Calculation of service as per Rule 2.42 of MSR Vol- 1 Part 1:-

<table>
<thead>
<tr>
<th></th>
<th>Y</th>
<th>M</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Feb 2017</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>01.03.2017 to 31.8.2017</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>01.09.2017 to 20.09.2017</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>21</td>
</tr>
</tbody>
</table>

Service of 6 months and 21 days will be completed on 20.09.2017
Ans 5(a) (i) Date of Retirement:

Date of Birth: 05.12.1957

Date of Birth: 05.12.2015

(ii) Qualifying Service

Date of Appointment: 26.02.1982

Date of Appointment: 26.02.1982 to 28.02.1982

Y M D

26.02.1982 to 28.02.1982
0 0 3

01.03.1982 to 31.12.1982
0 10 0

01.01.1983 to 31.12.2015
33 0 0

33 10 3

Less EOL

3 2 3

30 8 0

(iii) Pay as on 31.12.2015

Date Pay GP Total
01.01.2014 36280 8500 44780
01.03.2014 37630 8500 46130
01.03.2015 39020 8500 47520

Pay as on 31.12.2015 47520

(iv) Pension

Pension: 47520x50/100 = 23760

DA @119%

DA: 28274

Total: 52034
Less Commutation Value  7128
                      44906
(v) Gratuity       47520
   DA @119%       56549
                      104069
Gratuity = 104069 x 61/4 = 1587052.25/-
Max    Rs 1000000/-

Ans 5(b) The date of next increment does not change at the time of pay fixation on promotion, if the employee opts to get his pay fixation from the date of next increment as per para 11(iv) of Finance circular number 15/2009 dated 15.10.2009. In such cases, on the date of promotion pay in the pay band shall not be changed, but the grade pay of the higher post will be granted. Further, refixation will be done on the date of his next increment. On that day, he will be granted two increments; one annual increment and II on account of promotion. While computing these two increments, basic pay prior to the date of promotion shall be taken into account. For example, if the basic pay prior to the date of promotion was rupees 1000, first increment would be computed on rupees 1000 and second increment on rupees 1030.

Ans 5(c) As per para 3(3.1) of Finance circular number 18/2009 dated 15.10.2009, pension is to be calculated on the basis of last pay drawn or 10 months average which ever is beneficial to the Employees.

As such, the proposal of the office to calculate pension on the basis of average of 10 months emoluments when the pension on the basis of last pay is more beneficial to the employee, is against the spirit of instruction.
SOLUTION TO QUESTION NO. 1:-

a. "adolescent" means a person who has completed his fifteen year of age but has not completed his eighteenth year.

b. "hazardous process" means any process or activity in relation to an industry specified in the First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, bye- products, wastes or effluents thereof would-- (i) cause material impairment to the health of the persons engaged in or connected therewith, or (ii) result in the pollution of the general environment: Provided that the State Government may, by notification in the Official Gazette, amend the First Schedule by way of addition, omission or variation of any industry specified in the said Schedule.

c. "week" means a period of seven days beginning at midnight on Saturday night or such other night as may be approved in writing for a particular area by the Chief Inspector of Factories.

d. "power" means electrical energy, or any other form of energy which is mechanically transmitted and is not generated by human or animal agency.

e. "transmission machinery" means any shaft, wheel, drum, pulley, system of pulleys, coupling, clutch, driving belt or other appliance or device by which the motion of a prime mover is transmitted to or received by any machinery or appliance.
SOLUTION TO QUESTION NO. 2:-

2(i):-

(a) "air pollutant" means any solid, liquid or gaseous substance 2 [(including noise)] present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

(b) "approved appliances" means any equipment or gadget used for the bringing of any combustible material or for generating or consuming any fume, gas of particulate matter and approved by the State Board for the purpose of this Act.

(c) "control equipment" means any apparatus, device, equipment or system to control the quality and manner of emission of any air pollutant and includes any device used for securing the efficient operation of any industrial plant.

(d) "State Board" means,- (i) in relation to a State in which the Water (Prevention and Control of Pollution) Act, 1974, is in force and the State Government has constituted for that State a 5 [State Board for the Prevention and Control of Water Pollution] under section 4 of that Act, the said State Board; and (ii) in relation to any other State, the State Board for the Prevention and Control of Air Pollution constituted by the State Government under section 5 of this Act.

2(ii):-

With a view to ensuring that the standards for emission of air pollutants from automobiles laid down by the State Board tinder clause (g) of subsection (1) of section 17 are complied with, the State Government shall, in consultation with the State Board, give such instructions as may be deemed necessary to the concerned authority in charge of registration of motor vehicles under the Motor Vehicles Act, 1939 (Act 4 of 1939), and such authority shall, notwithstanding anything contained in that Act or the rules made thereunder be bound to comply with such instructions.
SOLUTION TO QUESTION NO. 3: -

(a) "appropriate Government" means in relation to a public authority which is established, constituted, owned, controlled or substantially financed by funds provided directly or indirectly—

(i) by the Central Government or the Union territory administration, the Central Government.
(ii) by the State Government, the State Government.

(b) "competent authority" means—

(i) the Speaker in the case of the House of the People or the Legislative Assembly of a State or a Union territory having such Assembly and the Chairman in the case of the Council of States or Legislative Council of a State.
(ii) the Chief Justice of India in the case of the Supreme Court.
(iii) the Chief Justice of the High Court in the case of a High Court.
(iv) the President or the Governor, as the case may be, in the case of other authorities established or constituted by or under the Constitution.
(v) the administrator appointed under article 239 of the Constitution.

(c) "information" means any material in any form, including records, documents, memos, e-mails, opinions, advices, press releases, circulars, orders, logbooks, contracts, reports, papers, samples, models, data material held in any electronic form and information relating to any private body which can be accessed by a public authority under any other law for the time being in force.

(d) "public authority" means any authority or body or institution of self government established or constituted—

(a) by or under the Constitution.
(b) by any other law made by Parliament.
(c) by any other law made by State Legislature.
(d) by notification issued or order made by the appropriate Government, and includes any—

(i) body owned, controlled or substantially financed.

(ii) non-Government organisation substantially financed, directly or indirectly by funds provided by the appropriate Government.

(e) "right to information" means the right to information accessible under this Act which is held by or under the control of any public authority and includes the right to—

(i) inspection of work, documents, records.

(ii) taking notes, extracts or certified copies of documents or records.

(iii) taking certified samples of material.

(iv) obtaining information in the form of diskettes, floppies, tapes, video cassettes or in any other electronic mode or through printouts where such information is stored in a computer or in any other device.
SOLUTION TO QUESTION NO. 4:-

(a) "appropriate laboratory" means a laboratory or organisation—

(i) recognised by the Central Government;

(ii) recognised by a State Government, subject to such guidelines as may be prescribed by the Central Government in this behalf; or

(iii) any such laboratory or organisation established by or under any law for the time being in force, which is maintained, financed or aided by the Central Government or a State Government for carrying out analysis or test of any goods with a view to determining whether such goods suffer from any defect.

(b) "complainant" means—

(i) a consumer; or

(ii) any voluntary consumer association registered under the Companies Act, 1956 (1 of 1956) or under any other law for the time being in force; or

(iii) the Central Government or any State Government,

(iv) one or more consumers, where there are numerous consumers having the same interest;

(v) in case of death of a consumer, his legal heir or representative; who or which makes a complaint.

(c) "manufacturer" means a person who—

(i) makes or manufactures any goods or part thereof; or

(ii) does not make or manufacture any goods but assembles parts thereof made or manufactured by others; or

(iii) puts or causes to be put his own mark on any goods made or manufactured by any other manufacturer;

Explanation. — Where a manufacturer dispatches any goods or part thereof to any branch office maintained by him, such branch office shall not be deemed to be the manufacturer even though the parts so dispatched to it are assembled at such branch office and are sold or distributed from such branch office.
(d) "restrictive trade practice" means a trade practice which tends to bring about manipulation of price or conditions of delivery or to affect flow of supplies in the market relating to goods or services in such a manner as to impose on the consumers unjustified costs or restrictions and shall include—

(a) delay beyond the period agreed to by a trader in supply of such goods or in providing the services which has led or is likely to lead to rise in the price;

(b) any trade practice which requires a consumer to buy, hire or avail of any goods or, as the case may be, services as condition precedent to buying, hiring or availing of other goods or services.

(e) "service" means service of any description which is made available to potential users and includes, but not limited to, the provision of facilities in connection with banking, financing insurance, transport, processing, supply of electrical or other energy, board or lodging or both, housing construction, entertainment, amusement or the purveying of news or other information, but does not include the rendering of any service free of charge or under a contract of personal service.
SOLUTION TO QUESTION NO. 5:-

(a) "enterprise" means an industrial undertaking or a business concern or any other establishment, by whatever name called, engaged in the manufacture or production of goods, in any manner, pertaining to any industry specified in the First Schedule to the Industries (Development and Regulation) Act, 1951 (55 of 1951) or engaged in providing or rendering of any service or services;

(b) "supplier" means a micro or small enterprise, which has filed a memorandum with the authority referred to in sub-section (1) of section 8, and includes,— (i) the National Small Industries Corporation, being a company, registered under the Companies Act, 1956 (1 of 1956); (ii) the Small Industries Development Corporation of a State or a Union territory, by whatever name called, being a company registered under the Companies Act, 1956 (1 of 1956); (iii) any company, co-operative society, trust or a body, by whatever name called, registered or constituted under any law for the time being in force and engaged in selling goods produced by micro or small enterprises and rendering services which are provided by such enterprises;

(c) "appointed day" means the day following immediately after the expiry of the period of fifteen days from the day of acceptance or the day of deemed acceptance of any goods or any services by a buyer from a supplier.

(d) "the day of acceptance" means,— (a) the day of the actual delivery of goods or the rendering of services; or (b) where any objection is made in writing by the buyer regarding acceptance of goods or services within fifteen days from the day of the delivery of goods or the rendering of services, the day on which such objection is removed by the supplier;

(e) "the day of deemed acceptance" means, where no objection is made in writing by the buyer regarding acceptance of goods or services within fifteen days from the day of the delivery of goods or the rendering of services, the day of the actual delivery of goods, or the rendering of services.
Q.1 Make a précis of the following passage in about one-third of its length. Suggest an appropriate title for the passage.

We all know what we mean by a "good" man. The ideally good man does not drink or smoke, avoids bad language, converses in the presence of men only exactly as he would if there were ladies present, attends church regularly and holds the correct opinion on all subjects. He has a wholesome horror of wrong-doing and realizes that it is our painful duty to castigate sin. He has a still greater horror of wrong thinking, and considers it the business of the authorities to safeguard the young against those who question the wisdom of the views generally accepted by middle-aged successful citizens. Apart from his professional duties, at which he is assiduous, he spends much time in good works: he may encourage patriotism and military training; he may promote industry, sobriety and virtue among wage earners and their children by seeing to it that failures in these respects receive due punishment; he may be a trustee of a university and prevent an ill-judged respect for learning from allowing the employment of professors with subversive ideas. Above all, of course, his "morals" in the narrow sense must be irreproachable.

(189 words)

Solution:

a) An ideally good man is intensely religious and avoids bad habits such as smoking and drinking. He does not use obscene or indecent language and has a fear of wrong doing and wrong thinking. He is professionally dutiful and takes active interest in promoting virtues such as patriotism, industry and sobriety among workers and their children. If possible, he prevents the employment of professors with subversive ideas.

(189 words)

b) Title: Characteristics of a good man (or any other suitable title)

c) Meaning is as under:
   i) Assiduous: showing great care, careful, meticulous, constant effort
   ii) Sobriety: state of being sober/ solemn, dignity, seriousness
   iii) Irreproachable: beyond criticism, faultless, perfect
   iv) Subversive: disruptive, trouble making, rebel
Q.2  a) Prepare an office order mentioning that Mr. XYZ, Sr. Asstt. will also be looking after court cases relating to your office and shall submit a monthly report of the same to the concerned Chief Engineer. The office order has been approved by Chief Engineer.

Soln:

Punjab State Power Corporation Limited
o/o Chief Engineer xxxx, PSPCL

Office order no: .......... Dated: 04/06/2019

In accordance with this office order, Mr. XYZ, Sr. Asstt. will look after the court cases relating to this office in addition to the duties already assigned to him without any additional remuneration. He shall submit a monthly report of the status of cases to Chief Engineer/ xxxx, PSPCL.

The officer order shall be complied with immediate effect.

This issues with the approval of Chief Engineer/ xxxx, PSPCL.

Sign
Chief Engineer/XXXX (Post)

Stamp

Endst __________ dated: 04/06/2019

1. Chief Engineer/ xxxx, PSPCL for information please
2. Mr. XYZ, Sr. Asstt for immediate compliance

b) Prepare a noting for approval of Director/ Distribution for constitution of a spot purchase committee for purchase of furniture worth Rs. 5 lakh for your office. The expenditure is to be charged to capital head and the purchase is required to be made as per PSPCL Purchase regulations vide which three member committee of gazetted officers is required with one officer from finance section. Clearly mention the hierarchy through which the noting will pass.
Soln:

Subject: Constitution of spot purchase committee for purchase of office furniture

It is submitted that the office furniture being used in this office has outlived its useful life and is beyond repair. There are repeated damages been reported in the furniture and repair of the same is not conducive due to furniture being old. Hence, the entire furniture is required to be replaced. The old furniture will be surveyed off after replacement with new furniture. As per current market rates, total cost of new furniture proposed to be procured is around Rs. 5 lacs and the same shall be charged to capital head. As per PSPCL Purchase regulations, a committee of the following officers may be constituted with financial powers of Rs. 5 lacs for purchase of above furniture via spot purchase:

a) Er. Xyz, Sr. Xen
b) Er. Abc, AEE
c) Sh. Uvw, AO

The above is submitted for approval of Dir/D, being the competent authority as per PSPCL Purchase Regulations.

Sr. Xen
SE
Chief Engineer
Dir/D

AE/AEE
Q.3

a) Do as directed in the brackets:
   i) Where do you live?
   ii) They were driving their car to Bangkok.
   iii) John or Mary is coming tonight.
   iv) Spoofy has hurt its leg.
   v) Active voice is preferred over Passive voice.
   vi) Neither Mani nor Bani went to school today.
   vii) Subject: The salesman, Predicate: sold 100 articles.
   viii) You say that you will visit London.
   ix) They said they had taken exercise.
   x) She said that she was going to London that day.

b) Write the meaning of the following idioms/ phrases:
   a) Achilles heel: someone's weakness
   b) A whale of a time: exciting experience
   c) See eye to eye: Agree with someone
   d) Beauty is in the eye of the beholder: Which one person finds beautiful may not appeal to another
   e) To feel under the weather: To not feel well
Q.4 a) 

i. Give full form of the following abbreviations:
   - SMPS: Switched Mode Power Supply
   - PDF: Portable Document Format
   - USB: Universal Serial Bus
   - WiFi: Wireless Fidelity

ii. Write the values of the following:
   a) \((1001)_2 = 1\times2^3 + 0\times2^2 + 0\times2^1 + 1\times2^0 = 8 + 0 + 0 + 1 = 9\)
   b) \((\text{FF})_{16} = 15\times16^1 + 15\times2^0 = 15\times16 + 15\times1 = 240 + 15 = 255\)
   c) \((11)_8 = 1\times8^1 + 1\times8^0 = 1\times8 + 1\times1 = 8 + 1 = 9\)
   d) \((1.01)_2 = 1\times2^0 + 0\times2^{-1} + 1\times2^{-2} = 1\times1 + 0\times0.5 + 1\times0.25 = 1.25\)

iii. Answer the following in detail:

   a) Differentiate between Hardware and Software

```
<table>
<thead>
<tr>
<th>Feature</th>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Hardware refers to physical devices that are necessary for storing and executing (or running) the software.</td>
<td>Software refers to a collection of programs, documentation, codes, instructions, etc. that enables users to interact with computer systems. Software is typically a program that's essential for computers to perform specific tasks.</td>
</tr>
<tr>
<td>Types</td>
<td>The different types of hardware comprise of input and storage devices, processing unit, control devices and output components.</td>
<td>Programming software, System software and Application software, are the different types of software available for users.</td>
</tr>
</tbody>
</table>
```
<table>
<thead>
<tr>
<th>Functionality</th>
<th>Hardware performs as a delivery system for different types of software solutions. In comparison to software programs, hardware components are infrequently changed.</th>
<th>The main function of software is to enable the performance of specific tasks with the help of hardware units. Although software may not be obligatory for the basic level tasks performed by computers, they definitely enhance the overall functionality of operating systems. Software is said to be 'soft' in nature as it can be readily created, erased or modified.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature</td>
<td>Hardware is tangible and physical in nature.</td>
<td>Software is non-tangible and logical in nature.</td>
</tr>
<tr>
<td>Inter-dependency</td>
<td>Hardware components can only start their operation once the software has been loaded correctly.</td>
<td>Software has to be installed on a specific hardware to enable it to work properly and give its instructions.</td>
</tr>
<tr>
<td>Failure</td>
<td>Hardware failure is said to be random. It is common to find hardware showcasing increasing failure at their last stages.</td>
<td>Software failures are systematic and do not depict any increasing failure rate or pattern.</td>
</tr>
<tr>
<td>Wear and Tear</td>
<td>Hardware depreciates in performance and wears out over time.</td>
<td>Software remains the way it is and does not wear out with the passage of time. However, it is common for bugs to appear in software with constant usage.</td>
</tr>
<tr>
<td>Virus Attacks</td>
<td>Hardware cannot be impacted by viral attacks directly.</td>
<td>Software programs and applications can be impacted by viral attacks with use.</td>
</tr>
</tbody>
</table>
Examples

| CD-ROM, display monitor, sound card, printer, video card, scanner, label maker, router, modem, etc. | Adobe Acrobat, QuickBooks, Google Chrome, Microsoft Excel, Microsoft Word, Apple Maps, etc. |

b) What is a Compiler? How is it different from an Interpreter.

**Soln:** Compiler is a program that converts program written in high-level language into machine code understood by the computer.

_Difference (Any three)_

<table>
<thead>
<tr>
<th>Interpreter</th>
<th>Compiler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translates program one statement at a time.</td>
<td>Scans the entire program and translates it as a whole into machine code.</td>
</tr>
</tbody>
</table>

| It takes less amount of time to analyze the source code but the overall execution time is slower. | It takes large amount of time to analyze the source code but the overall execution time is comparatively faster. |

| No intermediate object code is generated, hence are memory efficient. | Generates intermediate object code which further requires linking, hence requires more memory. |

| Continues translating the program until the first error is met, in which case it stops. Hence debugging is easy. | It generates the error message only after scanning the whole program. Hence debugging is comparatively hard. |

c) Explain any four financial functions in MS excel.

**Soln:** Financial functions in MS Excel are as under:

a) **FV:** Returns the future value (FV) of an initial investment, based on a constant interest rate and payment amount for the number of periods in months.

Syntax: `FV(payment; interest Rate; periods)`

Where:
- `payment` - payment to be made per period
- `interest Rate` - interest rate per period
- `periods` - number of periods

b) **NPV:** Returns the net present value (NPV) of a series of unequal payments made at regular intervals, assuming a fixed interest rate per interval.

Syntax: `NPV(payment; interest Rate)`

Where:
- `payment` - a repeating field containing unequal payment amounts, or an expression that returns a reference to one.
- `interest Rate` - interest rate per period

c) **PMT:** Returns the payment required by the term, interest rate, and principal.

Syntax: `PMT(principal; interest Rate; term)`

Where:
- `principal` - principal amount.
- `interest Rate` - interest rate. If the interest rate is annual, divide the rate by 12.
- `term` - length of time, expressed in number of months.

d) **PV:** Returns the present value (PV) of a series of equal payments made at regular intervals, assuming a fixed interest rate per interval.

Syntax: `PV(payment; interest Rate; periods)`

Where:
- `payment` - payment amount to be made per period. Type a negative number for money you pay and a positive number for money you receive.
Interest Rate - interest rate per period.
periods - number of periods (intervals between payments)

Other Excel finance functions are: (if these are discussed even then give marks)
a) XNPV: Any valuation analysis aimed at determining what a company is worth will need to determine the Net Present Value (NPV) of a series of cash flows. Unlike the regular NPV function in Excel, XNPV takes into account specific dates for cash flows and is, therefore, much more useful and precise.
Syntax: XNPV(discount_rate, cash_flows, dates)
b) XIRR: It determines the internal rate of return for a series of cash flows, given specific dates. XIRR should always be used over the regular IRR formula, as the time periods between cash flows are very unlikely to all be exactly the same.
XIRR(cash flows, dates)
c) IPMT: It calculates the interest portion of a fixed debt payment. This Excel function works very well in conjunction with the PMT function above. By separating out the interest payments in each period, we can then arrive at the principal payments in each period by taking the difference of PMT and IPMT.
IPMT(rate, current period #, total # of periods, present value)
d) DB: This is useful for accountants and finance professionals. It is used to calculate the depreciation expense in each period with this formula.
DB(cost, salvage value, life/# of periods, current period)
e) RATE: The RATE function can be used to calculate the Yield to Maturity for a security. This is useful when determining the average annual rate of return that is earned from buying a bond.
RATE(# of periods, coupon payment per period, price of bond, face value of bond, type)
iv. What is an Operating System? Explain four main features of the operating system commonly used in PSPCL.

**Soln:** An operating system (OS) is system software that manages computer hardware and software resources and provides common services for computer programs.

The most commonly used OS in PSPCL is MS Windows. Its four main features are (any four):

a) Control Panel: The Control Panel is a collection of tools to help you configure and manage the resources on your computer.

b) Desktop: The desktop is a fundamental part of the default GUI (graphical user interface) in Windows. It is a space where you can organize applications, folders, and documents, which appear as icons.

c) Device Manager: It lists the hardware devices installed in a computer. It also allows users to view, update and uninstall hardware.

d) Disk Cleanup: This utility helps increase free disk space on the computer by removing temporary or unnecessary files and improve the performance of the computer.

e) Task Manager: It gives an overview of what's running on the computer and how much of the system resources is being used by each application (task), sorting by CPU, RAM, and disk I/O usage.

f) Windows taskbar: It shows programs that are currently open, as well as a Quick Launch area that allows quick access to launch specific programs.

g) System Information: This utility provides information about the computer, including hardware and Windows details.

h) Registry Editor: It allows you to view the Windows system registry, and edit registry keys.
Q.5 a) Write short notes on the following:

i. Difference between backspace and delete functions
   **Soln:** Both the Delete key and Backspace key are used to delete text. However, when dealing with text, pressing the Del key deletes text to the right of the cursor and pressing the Backspace key deletes text to the left (backwards) of the cursor.

ii. Longest key on the keyboard
   **Soln:** Space key/space bar is the longest key on the keyboard. Its main purpose is to conveniently enter a space during typing.

iii. Mouse Pad
   **Soln:** A mouse pad is a thin rubber or plastic cushion of about 12 square inches or less with a plastic or textured surface. A mouse pad provides better traction and more precise cursor movement for a mouse than a desktop or other surface. Sometimes, a mouse pad includes a cushion for the user’s hand or wrist.

iv. Defragmentation
   **Soln:** Defragmentation is the process of locating the noncontiguous fragments of data into which a computer file may be divided as it is stored on a hard disk, and rearranging the fragments and restoring them into fewer fragments or into the whole file. This increased the speed of the computer.

v. Write four commonly used Anti-Virus softwares
   **Soln:** Most commonly used Anti Virus softwares are: (any four)
   a) Quick Heal
   b) K7
   c) Norton
   d) Kaspersky
   e) Bitdefender
   f) Avast
   g) McAfee
vi. Rootkit

**Soln:** A rootkit is software used by hackers to gain constant administrator-level access to a computer or network. A rootkit is typically installed through a stolen password or by exploiting system vulnerabilities without the victim's consent or knowledge.

vii. Multimedia

**Soln:** Multimedia refers to content that uses more than one medium that generally include text, sound, graphics/images and animation/video. Multimedia became an important concept as the Web moved away from a largely textual layout to a graphical one.

viii. Server

**Soln:** A server is a computer program or device that provides a service to another computer program and its user, also known as the client. In a data center, the physical computer that a server program runs on is also frequently referred to as a server.

ix. Supercomputer

**Soln:** A supercomputer is a computer with a high level of performance compared to a general-purpose computer e.g. Param, Cray Titan. The performance of a supercomputer is commonly measured in floating-point operations per second (FLOPS).

x. Refresh function in MS windows

**Soln:** It is used to update the display or reproduce the look of the desktop after a change. Refresh the desktop does not work to renew the condition of RAM, and do not clean or refreshes the computer.

**(Marks 10 x 2 =20)**

**b) What functions to the following keyboard shortcuts carry out:**

i. Ctrl + P in MS word: Prints a document

ii. F5 in MS power point: Starts slide show

iii. Ctrl + R in MS word: Right aligns the text

iv. Alt + F4: Closes the opened window

v. Windows button on keyboard: Pops up start menu