

पावर ट्रांसमिशन कारपोरेशन ऑफ उत्तराखण्ड लि०

(उत्तराखण्ड सरकार का उपक्रम)

मानव संसाधन एवं प्रशासनिक विभाग

विद्युत भवन, नजदीक-आई०एस०बी०टी० क्रासिंग, सहारनपुर रोड़, माजरा, देहरादून-248002

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पत्रांक: 2679 / मा०सं०एवंप्र०अनु० / पिटकुल / ईओ-12

दिनांक: 11.12.2022

विषय: अभियन्ता अधिकारियों (वि० एवं या०/जानपद) की व्यवसायिक परीक्षा भाग-1 के प्रश्न पत्रों, उत्तर कुंजीयों एवं अन्य निर्देशों के सम्बन्ध में।

अधिशासी अभियन्ता (सूचना प्रौद्योगिकी),
पिटकुल,
देहरादून।

कृपया व्यवसायिक परीक्षा भाग-1 (वि० एवं या० एवं जानपद संवर्ग) के प्रश्न पत्र, उक्त प्रश्न-पत्रों की उत्तर कुंजीयों एवं उक्त से सम्बन्धित निर्देश इस आशय से संलग्न कर प्रेषित किये जा रहे हैं कि उक्त प्रश्न पत्रों, उत्तर कुंजीयों एवं निर्देशों को कारपोरेशन की वेबसाइट पर एक अलग लिंक के माध्यम से अपलोड करना सुनिश्चित करें।

संलग्नक: यथोपरि।

(अनुपम सिंह)

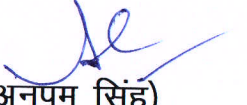
उपमहाप्रबन्धक (अधिष्ठान)

सूचना

अभियन्ता अधिकारियों (वि० एवं या०/जानपद) की व्यवसायिक परीक्षा भाग-1 की उत्तर-कुंजियों के सम्बन्ध में दिशा-निर्देश।

अभ्यर्थियों को यह सूचित किया जाता है कि यदि उत्तर कुंजियों में दिये गये उत्तरों के सापेक्ष प्रश्न-पत्र के किसी प्रश्न पर किसी अभ्यर्थी को कोई आपत्ति दर्ज करानी हो तो वह विलम्बतः दिनांक 12.12.2022 की सायं 05:00 बजे तक अपनी आपत्ति साक्ष्य सहित मानव संसाधन विभाग की ई-मेल hr@ptcul.org पर प्रेषित कर सकते हैं।

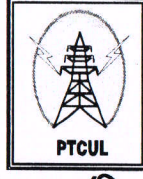
उपरोक्त तिथि के उपरान्त प्राप्त होने वाली आपत्तियों का संज्ञान कदाचित नहीं लिया जायेगा।



(अनुपम सिंह)

उपमहाप्रबन्धक (अधिष्ठान)

पावर ट्रॉसमिशन कारपोरेशन ऑफ उत्तराखण्ड लि0



व्यवसायिक परीक्षा भाग-1 (वि0 एवं यां0) (वर्ष-2022)

नाम	कक्ष पर्यवेक्षक का नाम एवं हस्ताक्षर	अवधि - 1½ घंटा (डेढ़ घंटा)
पदनाम	1	पूर्णांक - 176 अंक
अनुक्रमांक	2	
हस्ताक्षर.....	3	

अभ्यर्थियों के लिए आवश्यक निर्देश तथा जानकारी :-

1. अभ्यर्थी उत्तर देने से पूर्व प्रश्न-पत्र में दिये गये निर्देशों को ध्यानपूर्वक पढ़कर उनका अनुपालन करना सुनिश्चित करेंगे।
2. अभ्यर्थी अपना नाम, पदनाम एवं अनुक्रमांक सही-सही भरेंगे, गलत प्रविष्टि/अंकित करने के लिए अभ्यर्थी स्वयं पूर्णतः उत्तरदायी रहेगा।
3. लिखित परीक्षा 1:30 घण्टे की अवधि की होगी। लिखित परीक्षा का प्रश्न-पत्र 176 अंकों का होगा, प्रश्न-पत्र में कुल 88 बहुकल्पीय प्रश्न होंगे तथा प्रत्येक प्रश्न के उत्तर के चार विकल्प A, B, C तथा D दिये जायेंगे, जिनमें से केवल एक correct/best विकल्प का चुनाव करना है। सभी प्रश्न हल करने हैं।
4. प्रत्येक प्रश्न 02 अंक का होगा, सही उत्तर पर 02 अंक प्रदान किये जायेंगे। ऋणात्मक अंक व्यवस्था लागू नहीं होगी।
5. साक्षात्कार 24 अंकों का होगा, जो कि लिखित परीक्षा के उपरान्त लिया जायेगा।
6. लिखित परीक्षा एवं साक्षात्कार दोनों में संयुक्त रूप से चालीस प्रतिशत (40%) न्यूनतम उत्तीर्णांक होंगे अर्थात् लिखित परीक्षा एवं साक्षात्कार दोनों को मिलाकर 80 अंक प्राप्त करने अनिवार्य हैं।
7. लिखित परीक्षा हेतु अभ्यर्थी को अपने साथ काला/नीला बॉल प्वाइंट पैन लाना होगा। केवल काले अथवा नीले बॉल प्वाइंट पैन से ही OMR Sheet पर सही उत्तर वाले गोले को भरना होगा। पेन्सिल द्वारा OMR Sheet पर भरा गया गोला मान्य नहीं होगा।
8. प्रश्न में दिये गये चार विकल्पों में से केवल एक correct/best विकल्प का चुनाव कर काले अथवा नीले बॉल प्वाइंट पैन से ही OMR Sheet पर से सही उत्तर वाले गोले को भरा जाना है। इसके अतिरिक्त उत्तर हेतु विकल्पों में अन्य किसी प्रकार का कोई चिह्न यथा सही, क्रॉस का निशान या अर्द्ध गोला इत्यादि नहीं भरना है। प्रश्न-पत्र में फ्लूट/सफेदा/ओवरराइटिंग/कटिंग का प्रयोग वर्जित है, जिस कारण उत्तर को गलत माना जायेगा।
9. परीक्षा केन्द्र परिसर में परीक्षा के दौरान अभ्यर्थी द्वारा कैलकुलेटर, मोबाइल फोन अथवा किसी अन्य प्रकार के संचार यंत्र के परीक्षा केन्द्र के अन्दर ले जाने की अनुमति नहीं है। अभ्यर्थियों को उनके हित में सलाह दी जाती है कि वे परीक्षा स्थल पर मोबाइल फोन सहित किसी भी प्रकार की प्रतिबन्धित सामग्री न लायें क्योंकि उनकी सुरक्षा का प्रबन्ध सुनिश्चित नहीं किया जा सकता। परीक्षा कक्ष के बाहर रखे जाने पर इनके खो जाने अथवा टूटने-फूटने का उत्तरदायित्व सम्बन्धित अभ्यर्थी का होगा।
10. परीक्षा के दौरान कोई भी अभ्यर्थी किसी भी अन्य अभ्यर्थी के पेपरों से न तो नकल करेगा, न ही अपने पेपरों से नकल करवायेगा, न ही किस अन्य तरह से अनुचित सहायता देगा, न ही सहायता देने का प्रयास करेगा, न ही सहायता प्राप्त करेगा और न ही प्राप्त करने का प्रयास करेगा।
11. परीक्षा केन्द्र में अनुचित संसाधनों का प्रयोग प्रतिबन्धित है, अनुचित साधनों एवं प्रतिबन्धित सामग्री का प्रयोग करते हुए पकड़े जाने पर अभ्यर्थी को पर्यवेक्षक की रिपोर्ट के आधार पर अनुत्तीर्ण घोषित कर तीन साल के लिए परीक्षा में बैठने हेतु प्रतिबन्धित कर दिया जायेगा।
12. प्रश्नपत्र के प्रत्येक पृष्ठ पर अभ्यर्थी अपने हस्ताक्षर करना सुनिश्चित करें।

- Q-1 The positive, Negative and Zero sequence impedance of a solidly grounded system under steady state condition always follow the relations:
- (A) $Z_1 > Z_2 > Z_0$
 - (B) $Z_1 < Z_2 < Z_0$
 - (C) $Z_0 < Z_1 < Z_2$
 - (D) None of the above.
- Q-2 If the fault current is 2000 A, the relay setting 50% and the CT ratio is 400/5, then the Plug setting multiplier will be ;
- (A) 25 A
 - (B) 15A
 - (C) 50A
 - (D) None of the above
- Q-3 If the time of a relay for unity TMS is 10 sec, the time of operation for 0.5 TMS will be;
- (A) 20 Secs.
 - (B) 5 Secs.
 - (C) 10 Secs.
 - (D) None of the above
- Q-4 The P.U. Impedance of a transformer is 0.2 p.u. on base values 13.2 kV and 30 MVA. The P.U. value for the base values 13.8 kV and 50 MVA will be ;
- (A) 0.306 p.u.
 - (B) 0.33 p.u.
 - (C) 0.318 p.u.
 - (D) 0.328 p.u
- Q-5 A 3 phase breaker is rated at 2000 MVA, 33 kV its making current will be ;
- (A) 35 kA
 - (B) 49 kA
 - (C) 70 kA
 - (D) 89 kA
- Q-6 The buchholz relay protects a transformer from ;
- (A) All types of internal fault.
 - (B) A turn to turn fault.
 - (C) Winding to winding fault.
 - (D) None of the above.

Q-7 The connected load of a consumer is 2 KW and his maximum demand is 1.5 KW. The load factor of the consumer is ;

- (A) 0.75
- (B) 0.375
- (C) 1.33
- (D) None of the above.

Q-8 Corona loss increases with ;

- (A) Increase in supply frequency and conductor size.
- (B) Increase in supply frequency but reduction in conductor size.
- (C) Decrease in supply frequency and conductor size.
- (D) Decrease in supply frequency but increase in conductor size.

Q-9 The magnetizing inrush current in a transformer is rich in ;

- (A) 3rd harmonics.
- (B) 5th harmonics
- (C) 7th harmonics
- (D) 2nd harmonics

Q-10 In a Tap charging transformer, the tapplings are provided on ;

- (A) Primary winding
- (B) LV winding
- (C) HV winding
- (D) Any of the above

Q-11 If the transformer frequency is changed from 50 Hz to 60 Hz, the ratio of eddy current loss at 50 Hz to 60 Hz at constant voltage is ;

- (A) 5/6
- (B) 25/36
- (C) 6/5
- (D) 1.0

Q-12 The normal practice to specify the making current of a circuit breaker is in terms of ;

- (A) rms value
- (B) peak value
- (C) Array value
- (D) Both rms and peak value.

Q-13 The surge impedance of 50 miles long underground cable is 50 ohms. For a 25 miles length it will be ;

- (A) 25 ohms
- (B) 50 ohms
- (C) 100 ohms
- (D) None of the above.

Q-14 For a lightly loaded long transmission line receiving end voltage is ;

- (A) More than sending end voltage
- (B) Less than sending end voltage
- (C) Equal to sending end voltage
- (D) None of the above.

Q-15 which is not used for protection of a transformer ;

- (A) Over current protection
- (B) Differential protection
- (C) REF protection
- (D) Distance protection

Q-16 Shunt reactors are available in PTCUL at ;

- (A) 400 kV Substation Rishikesh only
- (B) 400 kV Substation Srinagar only
- (C) 400 kV Substation Kashipur only
- (D) Both (A) and (C)

Q-17 CO₂ type Fire Extinguisher should be used for which class of fire ;

- (A) Class A
- (B) Class B
- (C) Class C
- (D) Class F

Q-18 OPGW is used for ;

- (A) Earthing of transmission towers only
- (B) Communication only
- (C) Both (A) and (B)
- (D) None of the above.

Q-19 Which of the ACSR conductor will have maximum current carrying capacity ;

- (A) Panther
- (B) Zebra
- (C) Deer
- (D) Moose

Q-20 Time setting for which zone is kept instantaneous in distance protection ;

- (A) Zone-1
- (B) Zone-2
- (C) Zone-3
- (D) Zone-4

Q-21 Auto transformer can be used instead of two winding transformer ;

- (A) To save cost of core.
- (B) To save cost of winding.
- (C) Both (A) and (B).
- (D) Cannot be used.

Q-22 Transmission transformer are ;

- (A) Star-Star
- (B) Star-Delta
- (C) Delta-Star
- (D) Delta-Delta

Q-23 Which is not an essential condition for parallel operation of two transformers ;

- (A) Same Vector Group.
- (B) Same Voltage Ratio.
- (C) Same Percentage Impedance.
- (D) Same Capacity.

Q-24 Capacity of 40 MVA, 132 kV/33 kV transformer will be ;

- (A) 175 A on HV side.
- (B) 700 A on LV side.
- (C) 200 A on HV side
- (D) Both (A) and (C).

Q-25 PLCC in transmission line is used for ;

- (A) Communication only.
- (B) Protection Inter-tripping only .
- (C) Both (A) and (B).
- (D) None of the above.

Q-26 Wave trap acts as ;

- (A) A low pass filter.
- (B) A higher pass filter.
- (C) A band pass filter.
- (E) None of the above.

Q-27 POSOCO changes its name to ;

- (A) Grid controller of India Limited.
- (B) Power Grid Controller of India Limited.
- (C) National Grid Controlling Authority.
- (D) Grid Controlling Corporation of India Ltd.

Q-28 Which of the following power houses of UJVNL has maximum installed capacity ;

- (A) CHIBRO.
- (B) KHODRI.
- (C) DHARASU.
- (D) CHILLA.

Q-29 How many 400 kV substations are maintained by PTCUL at present ;

- (A) One.
- (B) Two.
- (C) Three.
- (D) Four.

Q-30 What is the maximum transformation capacity of transformer in PTCUL ;

- (A) 240 MVA.
- (B) 500 MVA.
- (C) 315 MVA.
- (D) 160 MVA.

Q-31 Advantages of GIS substation over AIS are ;

- (A) Compactness.
- (B) Protection from pollution.
- (C) Reduce switching over voltages.
- (D) All of the above.

Q-32 Gas used to provide the phase to ground insulation in GIS substation ;

- (A) CO_2 .
- (B) N_2 .
- (C) SF_6
- (D) None of the above.

Q-33 Eddy current loss will depends on ;

- (A) Frequency only
- (B) Flux density only
- (C) Thickness only
- (D) All of the above.

Q-34 SCADA stands for ;

- (A) Supervisory Control and Data Acquisition
- (B) System Control and Data Acquisition
- (C) Supervisory Control and Digital Accounting System.
- (D) None of the above.

Q-35 Which type of protection is main protection for transmission lines ;

- (A) Differential
- (B) Distance
- (C) Over current.
- (D) Earth Fault.

Q-36 What should be the CT ratio on LV side of a 40 MVA transformer ;

- (A) 800/1
- (B) 175/1
- (C) 400/1
- (D) 600/1

Q-37 DC Voltage used for protection in 400 kV substation in PTCUL ;

- (A) 110 V
- (B) 220 V
- (C) 132 V
- (D) 200 V

Q-38 Carrier current used for Power Line Carrier Communication has frequency range of ;

- (A) 80 kHz to 500 kHz
- (B) 100 MHz to 500 MHz
- (C) 1000 Hz to 10000 Hz
- (D) None of these.

Q-39 Which class of fire is fire in electrical equipments ;

- (A) A Class
- (B) B Class
- (C) C Class
- (D) D Class

Q-40 Directional relays are based on following ;

- (A) Power
- (B) Current
- (C) Voltage wave
- (D) All of the above

Q-41 When the 3-phase system is not grounded and if single line to ground fault occurs the voltage of the other to healthy phase will ;

- (A) Increase
- (B) Decrease
- (C) Remains same
- (D) None of the above

Q-42 Why in a firewall used in a computer ;

- (A) Monitoring
- (B) Data Transmission
- (C) Authentication
- (D) Security

Q-43 Among the following which is not a data base management software ;

- (A) MY SQL
- (B) COBOL
- (C) Sybase
- (D) Oracle

Q-44 The main memory of a computer system is ;

- (A) Non Volatile
- (B) Volatile
- (C) Restricted
- (D) Unrestricted

Q-45 Choose among the following, which is the most common internet protocol ;

- (A) PPP
- (B) FTP
- (C) TCP/IP
- (D) SMTP

Q-46 Computer word size is multiple of bits ;

- (A) 4 bits
- (B) 10 bits
- (C) 16 bits
- (D) 1024 bits

Q-47 SSL Stands for ;

- (A) Secure Socket Layer
- (B) Secure Secret Level
- (C) Secure System Level
- (D) Section Security Layer

Q-48 URL Stands for ;

- (A) Uninterrupted data Locator
- (B) Uninterrupted record Locator
- (C) Uniform record Locator
- (D) Uniform resource Locator

Q-49 How many times a woman employee can apply Child Care Leave during one calendar year

- (A) One
- (B) Two
- (C) Three
- (D) Four

Q-50 After punishment in a particular case a delinquent employee in what duration can place appeal to higher authority;

- (A) 30 days
- (B) 45 days
- (C) 60 days
- (D) 90 days

Q-51 In the month of January how many earned leave is credited to employees earned leave account?

- (A) 15 days
- (B) 16 days
- (C) 30 days
- (D) 31 days

Q-52 How many medical leaves are credited during probation period of employees?

- (A) 60 days
- (B) 90 days
- (C) 120 days
- (D) 365 days

Q-53 What is a duration for the promotion from the post Assistant Engineer to Executive Engineer according to UPSEB Engineer's Regulation 1970;

- (A) 07 years
- (B) 08 years
- (C) 09 years
- (D) None of the above

Q-54 In which financial year KPI,s for officers of PTCUL is implemented?

- (A) FY 2019-20
- (B) FY 2017-18
- (C) FY 2018-19
- (D) None of the above

Q-55 According to current pay matrix of PTCUL the pay Scale of Superintending Engineer is;

- (A) Rs. 37400-67000 (Level-13A of 7th Pay Matrix)
- (B) Rs. 37400-67000 (Level-14 of 7th Pay Matrix)
- (C) Rs. 37400-67000 (Level-13 of 7th Pay Matrix)
- (D) None of the above

Q-56 What is the last date for submitting ACR to Reporting Authority by an appraise;

- (A) 30 April
- (B) 05 May
- (C) 10 May
- (D) 25 May

Q-57 Date of incorporation of PTCUL is ;

- (A) 1 June
- (B) 9 June
- (C) 1 May
- (D) 9 November

Q-58 Selection year is a year between;

- (A) 1st April to 31st March
- (B) 1st July to 30th June
- (C) 1st June to 31st May
- (D) None of the above

Q-59 According to Companies Act 2013, in a particular year minimum numbers of Board Meetings to be held are:

- (A) Two
- (B) Three
- (C) Six
- (D) Four

Q-60 How much service period is required for voluntary retirement:

- (A) Twenty Years
- (B) Fifteen years
- (C) Nineteen Years
- (D) None of the above

Q-61 Share of a employee in Employees Provident Fund (EPF) is :

- (A) 10%
- (B) 8.33 %
- (C) 12%
- (D) 3.67%

Q-62 The full form of KPI is:

- (A) Key Progress Indicator
- (B) Key Performance Indicator
- (C) Key Progress Index
- (D) Key Performance Index

Q-63 Which of these punishment is included in minor punishment as per the provision of Disciplinary and Appeal Rules 1999 :

- (A) Suspension
- (B) Dismissal
- (C) Stopping increment with cumulative effect
- (D) Stopping increment with non cumulative effect

Q-64 Amongst which of these regulations, trade unions are governed :

- (A) Society Registration Act-1860
- (B) Trade Union Act 1926
- (C) Industrial Dispute Act 1947
- (D) None of the above

Q-65 How many earned leave balance is required for providing leave encashment;

- (A) 30 days
- (B) 60 days
- (C) 90 days
- (D) None of the above

Q-66 The regulatory authority of for Electricity Provisions in Uttarakhand is :

- (A) IRDA
- (B) TRAI
- (C) CERC
- (D) UERC

Q-67 What is the percentage of reservation for Handicapped in direct recruitment:

- (A) 2%
- (B) 4%
- (C) 5%
- (D) None of the above

Q-68 If an employee recruited in the year 2002 and got only one promotion in the year 2009 with higher pay scale, then which ACP he will get in the year 2019 :

- (A) Ist ACP
- (B) IInd ACP
- (C) IIIrd ACP
- (D) None of the above

Q-69 GST TDS provisions will apply where total value of such supply, under a contract, exceed rupees

- (A) 1 lakhs
- (B) 1.5 lakhs
- (C) 2.5 lakhs
- (D) 5 lakhs

Q-70 As per Income Tax Act Tax at source will be deducted @....from payments by way of rent for use of plant, Machinery or equipment under section.....

- (A) 2% 194J
- (B) 10% 194I
- (C) 2% 194I
- (D) 10% 194J

Q-71 Security deposit is :

- (A) Deposited at the time of filling the tender
- (B) Deposited at the time of opening tenders
- (C) Deposited for fair competition
- (D) Deposited by the contractor whose tender is accepted

Q-72 As per PTCUL ledger Cash Deposit of cash in bank is recorded in

- (A) Debit of Bank Column and Credit of Cash Column
- (B) Debit of Cash Column and Credit of Bank Column
- (C) Debit of Cash Column and also Credit of Cash Column
- (D) Debit of Bank Column and also Credit of Bank Column

Q-73 Ram's income Statement showed a loss for the year of Rs. 3500, it was later discovered that repairs to motor vehicles, Rs 600 had been debited to Motor Vehicles. What was the actual loss for the year?

- (A) Rs. 4700
- (B) Rs. 2300
- (C) Rs. 4100
- (D) Rs. 2900

Q-74 Collection from debtors

- (A) Decrease Current ratio
- (B) Increase Current ratio
- (C) Has no effect on Current ratio
- (D) None of the above

Q-75 Audit fee is a part of

- (A) Work on cost
- (B) Selling overheads
- (C) Distribution overheads
- (D) Administration overheads

Q-76 Which of the following is not part of Current Asset?

- (A) Debtors
- (B) Equity Capital
- (C) Inventory
- (D) Cash & Bank Balance

Q-77 In the income Tax Act 1961....is a certificate which an employer gives to his employees. It certifies the amount of tax deducted but the employer from the salary of the employee.

- (A) Form 16
- (B) Form 12
- (C) Form 16 A
- (D) Form 26AS

Q-78 What is the full form of EMI?

- (A) Ensure Monthly Installment
- (B) Equated Monthly Installment
- (C) Earned Monthly Installment
- (D) Early Monthly Installment

Q-79 As per UERC (Term and Condition for determination of Multi year tariff), regulation 2015, Depreciation on Hydraulic Works shall be provided at the rate of

- (A) 3.34%
- (B) 9.50%
- (C) 5.28%
- (D) 6.33%

Q-80 Sale of Land is;

- (A) Revenue receipt
- (B) Capital receipt
- (C) Capital expenditure
- (D) Revenue expenditure

Q-81 Purchase price of Machine Rs. 8,90,000; Freight and Cartage Rs. 7,000; Installation charges Rs. 30,000; Insurance charges Rs. 20,000; Residual value is Rs. 40,000; estimated useful life 5 years. The amount of annual depreciation under straight line method will be;

- (A) Rs. 1,77,400
- (B) Rs. 1,81,400
- (C) Rs. 1,97,400
- (D) Rs. 1,77,900

Q-82 When preparing a bank reconciliation statement, if you start with debit balance as per cash book cheques sent to bank but not collected should be;

- (A) Added
- (B) Deducted
- (C) Not required to be Adjusted
- (D) None of the above

Q-83 As per Accounting Rules pertaining to PTCUL, AG-12 pertains to;

- (A) Fixed Assets
- (B) Capital Expenditure in progress
- (C) Investments
- (D) Provision for Depreciation on Fixed Assets

Q-84 In which year Goods and Service Tax is made applicable in India?

- (A) 2016
- (B) 2017
- (C) 2018
- (D) 2019

Q-85 Which of the following account types increase by debits in double-entry accounting?

- (A) Assets, Expenses, Losses
- (B) Assets, Revenue, Gains
- (C) Expenses, Liabilities, Losses
- (D) Gains, Expenses, Liabilities

Q-86 What is the full form of MAT?

- (A) Monthly Alternate Tax
- (B) Maximum Alternate Tax
- (C) Marginal Alternate Tax
- (D) Minimum Alternate Tax

Q-87 What is the Maximum Tax exemption Under Section 80C of Income Tax Act, 1961?

- (A) Rs. 2.00 Lakh P.A.
- (B) Rs. 2.50 Lakh P.A.
- (C) Rs. 1.80 Lakh P.A.
- (D) Rs. 1.50 Lakh P.A.

Q-88 The price of two types of Rice is Rs. 15/ kg and Rs. 20/ kg. If both the types are mixed in the ratio 3:2 respectively, then what is the price per kg of the mixed variety of rice?

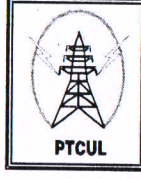
- (A) Rs. 18
- (B) Rs. 16
- (C) Rs. 15
- (D) Rs. 17

For Rough Work

Answer Key for the Professional Examination Part-1 (E&M)

Question No.	Answer	Question No.	Answer	Question No.	Answer
01	A	31	D	61	C
02	D	32	C	62	B
03	B	33	D	63	D
04	A	34	A	64	B
05	D	35	B	65	B
06	A	36	A	66	D
07	D	37	B	67	B
08	B	38	A	68	C
09	D	39	C	69	C
10	C	40	A	70	C
11	B	41	A	71	D
12	B	42	D	72	A
13	B	43	B	73	C
14	A	44	B	74	A
15	D	45	D	75	B
16	All correct	46	C	76	B
17	C	47	A	77	A
18	C	48	D	78	B
19	D	49	C	79	C
20	A	50	D	80	B
21	B	51	B	81	A
22	A	52	C	82	B
23	D	53	A	83	D
24	All correct	54	C	84	B
25	C	55	B	85	A
26	A	56	A	86	D
27	A	57	A	87	D
28	C	58	B	88	D
29	C	59	D		
30	C	60	A		

पावर ट्रांसमिशन कारपोरेशन ऑफ उत्तराखण्ड लि0



व्यवसायिक परीक्षा भाग-1 (जानपद) (वर्ष-2022)

नाम	कक्ष पर्यवेक्षक का नाम एवं हस्ताक्षर	अवधि - 1½ घंटा (डेढ़ घंटा)
पदनाम	1	पूर्णांक - 176 अंक
अनुक्रमांक	2	
हस्ताक्षर.....	3	

अभ्यर्थियों के लिए आवश्यक निर्देश तथा जानकारी :-

1. अभ्यर्थी उत्तर देने से पूर्व प्रश्न-पत्र में दिये गये निर्देशों को ध्यानपूर्वक पढ़कर उनका अनुपालन करना सुनिश्चित करेंगे।
2. अभ्यर्थी अपना नाम, पदनाम एवं अनुक्रमांक सही-सही भरेंगे, गलत प्रविष्टि/अंकित करने के लिए अभ्यर्थी स्वयं पूर्णतः उत्तरदायी रहेगा।
3. लिखित परीक्षा 1:30 घण्टे की अवधि की होगी। लिखित परीक्षा का प्रश्न-पत्र 176 अंकों का होगा, प्रश्न-पत्र में कुल 88 बहुकल्पीय प्रश्न होंगे तथा प्रत्येक प्रश्न के उत्तर के चार विकल्प A, B, C तथा D दिये जायेंगे, जिनमें से केवल एक correct/best विकल्प का चुनाव करना है। सभी प्रश्न हल करने हैं।
4. प्रत्येक प्रश्न 02 अंक का होगा, सही उत्तर पर 02 अंक प्रदान किये जायेंगे। ऋणात्मक अंक व्यवस्था लागू नहीं होगी।
5. साक्षात्कार 24 अंकों का होगा, जो कि लिखित परीक्षा के उपरान्त लिया जायेगा।
6. लिखित परीक्षा एवं साक्षात्कार दोनों में संयुक्त रूप से चालीस प्रतिशत (40%) न्यूनतम उत्तीर्णांक होंगे अर्थात् लिखित परीक्षा एवं साक्षात्कार दोनों को मिलाकर 80 अंक प्राप्त करने अनिवार्य हैं।
7. लिखित परीक्षा हेतु अभ्यर्थी को अपने साथ काला/नीला बॉल प्वाइंट पैन लाना होगा। केवल काले अथवा नीले बॉल प्वाइंट पैन से ही OMR Sheet पर सही उत्तर वाले गोले को भरना होगा। पेन्सिल द्वारा OMR Sheet पर भरा गया गोला मान्य नहीं होगा।
8. प्रश्न में दिये गये चार विकल्पों में से केवल एक correct/best विकल्प का चुनाव कर काले अथवा नीले बॉल प्वाइंट पैन से ही OMR Sheet पर से सही उत्तर वाले गोले को भरा जाना है। इसके अतिरिक्त उत्तर हेतु विकल्पों में अन्य किसी प्रकार का कोई चिह्न यथा सही, क्रॉस का निशान या अर्द्ध गोला इत्यादि नहीं भरना है। प्रश्न-पत्र में प्लूयट/सफेदा/ओवरराइटिंग/कटिंग का प्रयोग वर्जित है, जिस कारण उत्तर को गलत माना जायेगा।
9. परीक्षा केन्द्र परिसर में परीक्षा के दौरान अभ्यर्थी द्वारा कैलकुलेटर, मोबाइल फोन अथवा किसी अन्य प्रकार के संचार यंत्र के परीक्षा केन्द्र के अन्दर ले जाने की अनुमति नहीं है। अभ्यर्थियों को उनके हित में सलाह दी जाती है कि वे परीक्षा स्थल पर मोबाइल फोन सहित किसी भी प्रकार की प्रतिबन्धित सामग्री न लायें क्योंकि उनकी सुरक्षा का प्रबन्ध सुनिश्चित नहीं किया जा सकता। परीक्षा कक्ष के बाहर रखे जाने पर इनके खो जाने अथवा टूटने-फूटने का उत्तरदायित्व सम्बन्धित अभ्यर्थी का होगा।
10. परीक्षा के दौरान कोई भी अभ्यर्थी किसी भी अन्य अभ्यर्थी के पेपरों से न तो नकल करेगा, न ही अपने पेपरों से नकल करवायेगा, न ही किस अन्य तरह से अनुचित सहायता देगा, न ही सहायता देने का प्रयास करेगा, न ही सहायता प्राप्त करेगा और न ही प्राप्त करने का प्रयास करेगा।
11. परीक्षा केन्द्र में अनुचित संसाधनों का प्रयोग प्रतिबन्धित है, अनुचित साधनों एवं प्रतिबन्धित सामग्री का प्रयोग करते हुए पकड़े जाने पर अभ्यर्थी को पर्यवेक्षक की रिपोर्ट के आधार पर अनुत्तीर्ण घोषित कर तीन साल के लिए परीक्षा में बैठने हेतु प्रतिबन्धित कर दिया जायेगा।
12. प्रश्नपत्र के प्रत्येक पृष्ठ पर अभ्यर्थी अपने हस्ताक्षर करना सुनिश्चित करें।

Q-1 Ultimate strength to cement is provided by ;

- (A) Tricalcium silicate
- (B) Di-calcium silicate
- (C) Tri-calcium aluminate
- (D) Tetra calcium alumino ferrite.

Q-2 Bitumen felt-

- (A) Is used as water proofing material
- (B) Is used as damp proofing material
- (C) Is made from bitumen and hessian fibres
- (D) All the above.

Q-3 Sand stone is-

- (A) Sedimentary rock
- (B) Metamorphic rock
- (C) Igneous rock
- (D) Volcanic rock.

Q-4 Due to attack of dry rot, the timber-

- (A) Cracks
- (B) Shrinks
- (C) Starts decaying due to attack of fungi.
- (D) none of these.

Q-5 Galvanizing means covering iron with a thin coat of-

- (A) Tin
- (B) Zinc
- (C) Glaze
- (D) Coal Tar

Q-6 Pick up the correct statement from the following:

- (A) In stone arches, the stones are placed with their natural beds radial
- (B) In cornices, the stones are placed with their natural beds as vertical.
- (C) In stone walls, the stones are placed with their natural beds as horizontal.
- (D) All the above.

Q-7 A badly mixed cement concrete results in-

- (A) Segregation
- (B) Bleeding
- (C) Honey combing
- (D) None to these.

Q-8 Inner part of a timber log surrounding the pith, is called-

- (A) Sapwood
- (B) Cambium layer
- (C) Heart wood
- (D) none to these.

Q-9 Distemper is-

- (A) A paint consisting of powdered chalk, pigments, and water.
- (B) A water proofing agent.
- (C) A paint consisting of coloured cement and water.
- (D) A drying agent.

Q-10 Refractory bricks resist-

- (A) High temperature.
- (B) Chemical action.
- (C) Dampness.
- (D) All the above.

Q-11 An ideal vertical curve to join two gradients, is-

- (A) Circular.
- (B) Parabolic.
- (C) Hyperbolic.
- (D) None of these.

Q-12 The intercept of a staff-

- (A) Is maximum if the staff is held truly normal to the line of sight.
- (B) Is minimum if the staff is held truly normal to the line of sight.
- (C) Decreases if the staff is tilted away from normal.
- (D) Increases if the staff is tilted towards normal.

Q-13 Closed contours of decreasing values towards their centre, represent.

- (A) A hill
- (B) A depression
- (C) A saddle or pass
- (D) A river bed.

Q-14 The main principle of surveying is to work-

- (A) From part to the whole.
- (B) From whole to the part.
- (C) From higher level to the lower level.
- (D) From lower level to higher level.

- Q-15 Keeping the instrument height as 1.5 m, length of staff 4 m, the slope of the ground as 1 in 10, the sight on the down-slope, must be less than-
- (A) 30 m
 - (B) 25 m
 - (C) 20 m
 - (D) 15 m
- Q-16 The angle between two plane mirrors of optical square, is-
- (A) 20°
 - (B) 30°
 - (C) 45°
 - (D) 60°
- Q-17 The active earth pressure of a soil is proportional to (where ϕ is the angle of friction of the soil)-
- (A) $\tan(45^\circ - \phi)$
 - (B) $\tan^2(45^\circ + \phi/2)$
 - (C) $\tan^2(45^\circ - \phi/2)$
 - (D) $\tan(45^\circ + \phi)$
- Q-18 The minimum water content at which the soil just begins to crumble when rolled into threads 3 mm in diameter, is known-
- (A) Liquid limit
 - (B) Plastic limit
 - (C) Shrinkage limit
 - (D) Permeability limit.
- Q-19 Minimum size of the particles of silty soil, is-
- (A) 0.002 mm
 - (B) 0.04 mm
 - (C) 0.06 mm
 - (D) 0.08 mm
- Q-20 Under-reamed piles are generally-
- (A) Driven piles
 - (B) Bored piles
 - (C) Precast piles
 - (D) All the above
- Q-21 The ratio of the volume of voids to the volume of soil solids in a given soil mass, is known-
- (A) Porosity.
 - (B) Specific gravity
 - (C) Void ratio
 - (D) Water content

Q-22 A syphon is used-

- (A) To connect water reservoirs at different levels intervened by a hill.
- (B) To supply water to a town from higher level to lower level.
- (C) To fill up a tank with water at higher level from a lower level.
- (D) None of these.

Q-23 The minimum recommended diameter of sewers, is-

- (A) 5 cm
- (B) 10 cm
- (C) 15 cm
- (D) 20 cm.

Q-24 Aerobic bacteria-

- (A) Flourish in the presence of free oxygen.
- (B) Consume organic matter as their food.
- (C) Oxidize organic matter in sewage.
- (D) All the above.

Q-25 Pick up the correct statement from the following :

- (A) In acidic sewage, the pH value is less than 7.
- (B) In alkaline sewage, the pH value is more than 7
- (C) Fresh sewage is generally alkaline.
- (D) All the above.

Q-26 Pick up the incorrect statement from the following:

- (A) The tail of the arrow indicates the start of the activity.
- (B) The head of the arrow indicates the end of the activity.
- (C) The arrows are drawn to scale from left to right.
- (D) Each activity consumes a given time.

Q-27 Pick up the PERT event from the following:

- (A) Digging of foundation started.
- (B) Digging of foundation completed.
- (C) Laying of concrete completed.
- (D) All the above.

Q-28 The point of contra flexure is the point where-

- (A) B.M. changes sign.
- (B) B.M. is maximum
- (C) B.M. is minimum.
- (D) S.F. is zero.

Q-29 Pick up the item of work not included in the plinth area estimate.

- (A) Wall thickness.
- (B) Room area.
- (C) Verandah area.
- (D) Courtyard area.

Q-30 In long and short wall method of estimation, the length of long wall is the centre to centre distance between the walls and-

- (A) Breadth of the wall.
- (B) Half breadth of wall on each side.
- (C) One fourth breadth of wall on each side.
- (D) None of these.

Q-31 The minimum width of a septic tank is taken-

- (A) 70 cm
- (B) 75 cm
- (C) 80 cm
- (D) 80 cm

Q-32 The main factor to be considered while preparing a detailed estimate, is-

- (A) Availability of materials.
- (B) Transportation of materials.
- (C) Location of site and local labor charges.
- (D) All the above.

Q-33 The damp proof course (D.P.C.) is measured in-

- (A) Cub.m
- (B) Sq m
- (C) Metres
- (D) None of these.

Q-34 Thickness of a pavement may be reduced considerably by-

- (A) Compaction of soil.
- (B) Stabilisation of soil.
- (C) Drainage of soil.
- (D) Combination of all the above.

Q-35 The maximum area of tension reinforcement in beams shall not exceed-

- (A) 0.15%
- (B) 1.5%
- (C) 4%
- (D) 1%

Q-36 The minimum number of main steel bars provided in R.C.C.-

- (A) Rectangular columns is 4.
- (B) Circular columns is 6.
- (C) Octagonal columns is 8.
- (D) All the above.

Q-37 An R.C.C. column is treated as long column, if the ratio between the effective length and least lateral dimension is more than-

- (A) 30
- (B) 12
- (C) 25
- (D) 60

Q-38 The basic value of span to depth ratio for continuous beams for spans up to 10 m. is-

- (A) 15
- (B) 26
- (C) 20
- (D) None of the above.

Q-39 If the effective length of a 32 cm diameter R.C.C. column is 4.40 m, its slenderness ratio, is-

- (A) 45
- (B) 50
- (C) 55
- (D) 60

Q-40 In a singly reinforced beam, if the permissible stress in concrete reaches earlier than that in steel, the beam section is called.

- (A) Under-reinforced section.
- (B) Over reinforced section.
- (C) Economic section.
- (D) Critical section.

Q-41 According to the steel beam theory of doubly reinforced beams-

- (A) Compression is resisted by compression steel.
- (B) Stress in tension steel equals the stress in compression steel.
- (C) No stress is developed in compression concrete as well as in tension concrete.
- (D) All the above.

Q-42 Why in a firewall used in a computer ;

- (A) Monitoring
- (B) Data Transmission
- (C) Authentication
- (D) Security

Q-43 Among the following which is not a data base management software ;

- (A) MY SQL
- (B) COBOL
- (C) Sybase
- (D) Oracle

Q-44 The main memory of a computer system is ;

- (A) Non Volatile
- (B) Data Transmission
- (C) Authentication
- (D) Security

Q-45 Choose among the following, which is the most common internet protocol ;

- (A) PPP
- (B) FTP
- (C) TCP/IP
- (D) SMTPL

Q-46 Computer word size is multiple of bits ;

- (A) 4 bits
- (B) 10 bits
- (C) 16 bits
- (D) 1024 bits

Q-47 SSL Stands for ;

- (A) Secure Socket Layer
- (B) Secure Secret Level
- (C) Secure System Level
- (D) Section Security Layer

Q-48 URL Stands for ;

- (A) Uninterrupted data Locator
- (B) Uninterrupted record Locator
- (C) Uniform record Locator
- (D) Uniform resource Locator

- Q-49 GST TDS provisions will apply where total value of such supply, under a contract, exceed rupees
- (A) 1 lakhs
 - (B) 1.5 lakhs
 - (C) 2.5 lakhs
 - (D) 5 lakhs
- Q-50 As per Income Tax Act Tax at source will be deducted @....from payments by way of rent for use of plant, Machinery or equipment under section.....
- (A) 2% 194J
 - (B) 10% 194I
 - (C) 2% 194I
 - (D) 10% 194J
- Q-51 Security deposit is :
- (A) Deposited at the time of filling the tender
 - (B) Deposited at the time of opening tenders
 - (C) Deposited for fair competition
 - (D) Deposited by the contractor whose tender is accepted
- Q-52 As per PTCUL ledger Cash Deposit of cash in bank is recorded in
- (A) Debit of Bank Column and Credit of Cash Column
 - (B) Debit of Cash Column and Credit of Bank Column
 - (C) Debit of Cash Column and also Credit of Cash Column
 - (D) Debit of Bank Column and also Credit of Bank Column
- Q-53 Ram's income Statement showed a loss for the year of Rs. 3500, it was later discovered that repairs to motor vehicles, Rs 600 had been debited to Motor Vehicles. What was the actual loss for the year?
- (A) Rs. 4700
 - (B) Rs. 2300
 - (C) Rs. 4100
 - (D) Rs. 2900
- Q-54 Collection from debtors
- (A) Decrease Current ratio
 - (B) Increase Current ratio
 - (C) Has no effect on Current ratio
 - (D) None of the above
- Q-55 Audit fee is a part of
- (A) Work on cost
 - (B) Selling overheads
 - (C) Distribution overheads
 - (D) Administration overheads

- Q-56 Which of the following is not part of Current Asset?
- (A) Debtors
 - (B) Equity Capital
 - (C) Inventory
 - (D) Cash & Bank Balance
- Q-57 In the income Tax Act 1961....is a certificate which an employer gives to his employees. It certifies the amount of tax deducted but the employer from the salary of the employee.
- (A) Form 16
 - (B) Form 12
 - (C) Form 16 A
 - (D) Form 26AS
- Q-58 What is the full form of EMI?
- (A) Ensure Monthly Installment
 - (B) Equated Monthly Installment
 - (C) Earned Monthly Installment
 - (D) Early Monthly Installment
- Q-59 As per UERC (Term and Condition for determination of Multi year tariff), regulation 2015, Depreciation on Hydraulic Works shall be provided at the rate of
- (A) 3.34%
 - (B) 9.50%
 - (C) 5.28%
 - (D) 6.33%
- Q-60 Sale of Land is;
- (A) Revenue receipt
 - (B) Capital receipt
 - (C) Capital expenditure
 - (D) Revenue expenditure
- Q-61 Purchase price of Machine Rs. 8,90,000; Freight and Cartage Rs. 7,000; Installation charges Rs. 30,000; Insurance charges Rs. 20,000; Residual value is Rs. 40,000; estimated useful life 5 years. The amount of annual depreciation under straight line method will be;
- (A) Rs. 1,77,400
 - (B) Rs. 1,81,400
 - (C) Rs. 1,97,400
 - (D) Rs. 1,77,900

- Q-62 When preparing a bank reconciliation statement, if you start with debit balance as per cash book cheques sent to bank but not collected should be;
- (A) Added
 - (B) Deducted
 - (C) Not required to be Adjusted
 - (D) None of the above
- Q-63 As per Accounting Rules pertaining to PTCUL, AG-12 pertains to;
- (A) Fixed Assets
 - (B) Capital Expenditure in progress
 - (C) Investments
 - (D) Provision for Depreciation on Fixed Assets
- Q-64 In which year Goods and Service Tax is made applicable in India?
- (A) 2016
 - (B) 2017
 - (C) 2018
 - (D) 2019
- Q-65 Which of the following account types increase by debits in double-entry accounting?
- (A) Assets, Expenses, Losses
 - (B) Assets, Revenue, Gains
 - (C) Expenses, Liabilities, Losses
 - (D) Gains, Expenses, Liabilities
- Q-66 What is the full form of MAT?
- (A) Monthly Alternate Tax
 - (B) Maximum Alternate Tax
 - (C) Marginal Alternate Tax
 - (D) Minimum Alternate Tax
- Q-67 What is the Maximum Tax exemption Under Section 80C of Income Tax Act, 1961?
- (A) Rs. 2.00 Lakh P.A.
 - (B) Rs. 2.50 Lakh P.A.
 - (C) Rs. 1.80 Lakh P.A.
 - (D) Rs. 1.50 Lakh P.A.
- Q-68 The price of two types of Rice is Rs. 15/ kg and Rs. 20/ kg. If both the types are mixed in the ratio 3:2 respectively, then what is the price per kg of the mixed variety of rice?
- (A) Rs. 18
 - (B) Rs. 16
 - (C) Rs. 15
 - (D) Rs. 17

- Q-69 How many times a woman employee can apply Child Care Leave during one calendar year
- (A) One
 - (B) Two
 - (C) Three
 - (D) Four
- Q-70 After punishment in a particular case a delinquent employee in what duration can place appeal to higher authority;
- (A) 30 days
 - (B) 45 days
 - (C) 60 days
 - (D) 90 days
- Q-71 In the month of January how many earned leave is credited to employees earned leave account?
- (A) 15 days
 - (B) 16 days
 - (C) 30 days
 - (D) 31 days
- Q-72 How many medical leaves are credited during probation period of employees?
- (A) 60 days
 - (B) 90 days
 - (C) 120 days
 - (D) 365 days
- Q-73 What is a duration for the promotion from the post Assistant Engineer to Executive Engineer according to UPSEB Engineer's Regulation 1970;
- (A) 07 years
 - (B) 08 years
 - (C) 09 years
 - (D) None of the above
- Q-74 In which financial year KPI,s for officers of PTCUL is implemented?
- (A) FY 2019-20
 - (B) FY 2017-18
 - (C) FY 2018-19
 - (D) None of the above
- Q-75 According to current pay matrix of PTCUL the pay Scale of Superintending Engineer is;
- (A) Rs. 37400-67000 (Level-13A of 7th Pay Matrix)
 - (B) Rs. 37400-67000 (Level-14 of 7th Pay Matrix)
 - (C) Rs. 37400-67000 (Level-13 of 7th Pay Matrix)
 - (D) None of the above

- Q-76 What is the last date for submitting ACR to Reporting Authority by an appraise;
- (A) 30 April
 - (B) 05 May
 - (C) 10 May
 - (D) 25 May
- Q-77 Date of incorporation of PTCUL is ;
- (A) 1 June
 - (B) 9 June
 - (C) 1 May
 - (D) 9 November
- Q-78 Selection year is a year between;
- (A) 1st April to 31st March
 - (B) 1st July to 30th June
 - (C) 1st June to 31st May
 - (D) None of the above
- Q-79 According to Companies Act 2013, in a particular year minimum numbers of Board Meetings to be held are:
- (A) Two
 - (B) Three
 - (C) Six
 - (D) Four
- Q-80 How much service period is required for voluntary retirement:
- (A) Twenty Years
 - (B) Fifteen years
 - (C) Nineteen Years
 - (D) None of the above
- Q-81 Share of a employee in Employees Provident Fund (EPF) is :
- (A) 10%
 - (B) 8.33 %
 - (C) 12%
 - (D) 3.67%
- Q-82 The full form of KPI is:
- (A) Key Progress Indicator
 - (B) Key Performance Indicator
 - (C) Key Progress Index
 - (D) Key Performance Index

- Q-83 Which of these punishment is included in minor punishment as per the provision of Disciplinary and Appeal Rules 1999 :
- (A) Suspension
 - (B) Dismissal
 - (C) Stopping increment with cumulative effect
 - (D) Stopping increment with non cumulative effect
- Q-84 Amongst which of these regulations, trade unions are governed :
- (A) Society Registration Act-1860
 - (B) Trade Union Act 1926
 - (C) Industrial Dispute Act 1947
 - (D) None of the above
- Q-85 How many earned leave balance is required for providing leave encashment;
- (A) 30 days
 - (B) 60 days
 - (C) 90 days
 - (D) None of the above
- Q-86 The regulatory authority of for Electricity Provisions in Uttarakhand is :
- (A) IRDA
 - (B) TRAI
 - (C) CERC
 - (D) UERC
- Q-87 What is the percentage of reservation for Handicapped in direct recruitment:
- (A) 2%
 - (B) 4%
 - (C) 5%
 - (D) None of the above
- Q-88 If an employee recruited in the year 2002 and got only one promotion in the year 2009 with higher pay scale, then which ACP he will get in the year 2019 :
- (A) Ist ACP
 - (B) IIInd ACP
 - (C) IIIrd ACP
 - (D) None of the above

For Rough Work

Answer Key for the Professional Examination Part-1 (Civil)

Question No.	Answer	Question No.	Answer	Question No.	Answer
01	B	31	B	61	A
02	D	32	D	62	B
03	A	33	B	63	D
04	C	34	D	64	B
05	B	35	C	65	A
06	D	36	D	66	D
07	C	37	B	67	D
08	C	38	B	68	D
09	A	39	C	69	C
10	A	40	B	70	D
11	D	41	D	71	B
12	D	42	D	72	C
13	B	43	B	73	A
14	B	44	All correct	74	C
15	B	45	D	75	B
16	C	46	C	76	A
17	C	47	A	77	A
18	B	48	D	78	B
19	A	49	C	79	D
20	B	50	C	80	A
21	C	51	D	81	C
22	A	52	A	82	B
23	B	53	C	83	D
24	D	54	A	84	B
25	D	55	D	85	B
26	C	56	B	86	D
27	D	57	A	87	B
28	A	58	B	88	C
29	D	59	C		
30	B	60	B		