

मध्यप्रदेश लोक सेवा आयोग, इन्दौर

क्रमांक/क्यू.1/69/2011/प-9

इन्दौर, दिनांक 10.10.2015

सहायक कृषि यंत्री परीक्षा-2013

आयोग के विज्ञापन क्रमांक 02/चयन/2013 दिनांक 06.05.2013 के अंतर्गत आयोजित सहायक कृषि यंत्री परीक्षा-2013 की ऑनलाईन परीक्षा दिनांक 10.10.2015 के वस्तुनिष्ठ प्रकार के प्रश्नपत्रों की उत्तरकुंजी परीक्षा परिणाम बनाने के पूर्व आयोग की वेबसाईट पर प्रकाशित की जा रही है। इसके अंतर्गत यदि किसी प्रश्न पत्र की उत्तर कुंजी में किसी अभ्यर्थी को प्रश्नपत्र अथवा इनके उत्तर से संबंधित अभ्यावेदन प्रस्तुत करना हो तो अभ्यर्थी अपना अभ्यावेदन प्रमाणित संदर्भों सहित आयोग की वेबसाईट पर उत्तरकुंजी प्रकाशित होने के दिनांक से 7 दिवस के अंदर आयोग कार्यालय में परीक्षा नियंत्रक के नाम से स्पीड पोस्ट द्वारा या स्वयं परीक्षा नियंत्रक कार्यालय में जमा करें। लिफाफे के ऊपर सहायक कृषि यंत्री परीक्षा-2013 से संबंधित अभ्यावेदन अवश्य लिखें। अंतिम दिनांक 17.10.2015 के पश्चात् उक्त परीक्षा से संबंधित अभ्यावेदन स्वीकार नहीं किये जायेंगे।

2/ समस्त परीक्षार्थी ऑनलाईन परीक्षा के दौरान उनके द्वारा दिये गये उत्तर प्रश्न सहित आयोग की वेबसाईट से डाऊनलोड कर सकते हैं इस हेतु आवेदक उनके प्रवेश पत्र पर अंकित रोल नम्बर एवं पासवर्ड की सहायता से लॉगिन करें।

3/ प्रावधिक (Provisional) मॉडल उत्तर कुंजी निम्नानुसार आयोग की वेबसाईट पर दिनांक 10.10.2015 से उपलब्ध है -

Q.No: 1	Contour bunds are recommended for the areas of
A	High rainfall and low infiltration capacity
B	Low rainfall and high infiltration capacity
C	Medium rainfall and low infiltration capacity
D	None of these is correct
Correct Answer	B

Q.No: 2	Drop structures are designed in respect of
A	Hydrologic
B	Hydraulic
C	Structural
D	All options are correct
Correct Answer	D

Q.No: 3	In order that the plants in every corner should receive maximum light, the green house axis is placed in direction.
A	North - South
B	East - West
C	Any direction
D	None of these is correct

Correct Answer	B
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Q.No: 4	Green houses can be broadly classified as wooden framed, pipe framed and truss framed structures based on
A	size
B	shape
C	construction
D	utility
Correct Answer	C

Q.No: 5	The primary objective of surveying is to prepare a
A	Cross-section
B	Drawing
C	Map
D	Sketch
Correct Answer	C

Q.No: 6	In face left position of theodolite, the position of vertical circle is on of observer.
A	left
B	right
C	front
D	back
Correct Answer	A

Q.No: 7	The reading taken by level on levelling staff kept at point of known elevation is entered as reading.
A	Back sight
B	Intermediate sight
C	Fore sight
D	None of these is correct
Correct Answer	A

Q.No: 8	The bearing $168^{\circ} 13'$ in WCB system can be expressed as in QB system.
A	N $168^{\circ} 13'$ E
B	S $191^{\circ} 47'$ W

C	S 11° 47' E
D	N 11° 47' W
Correct Answer	C

Q.No: 9	When flow changes from hydraulic jumps occurs.
A	Critical to Super critical
B	Sub critical to Super critical
C	Super critical to Sub critical
D	None of these is correct
Correct Answer	C

Q.No: 10	Safety against overturning of water retaining structure can be ensured by
A	increasing uplift pressure
B	reducing restoring moment
C	reducing self weight of structure
D	None of these is correct
Correct Answer	D

Q.No: 11 Water measuring device do not need free flow conditions at outlet.
A	H-flume
B	Rectangular weir
C	Parshall flume
D	All options are correct
Correct Answer	C

Q.No: 12	The planning of conjunctive use of surface and ground water is done for
A	facilitating irrigation with poor quality ground water
B	augmenting canal supplies
C	combating water logging in the area
D	All options are correct
Correct Answer	D

Q.No: 13	The discharge in distributaries is usually
A	less than 2.5 cumec

B	less than 30 cumec
C	more than 30 cumec
D	None of these is correct
Correct Answer	B

Q.No: 14	The structure used for passing the canal over the natural drain is called as
A	Aqueduct
B	Syphon
C	Cross regulator
D	None of these is correct
Correct Answer	A

Q.No: 15	In arc welding, the arc between work and electrode is produced by
A	Contact resistance
B	Flow of current
C	Voltage
D	All options are correct
Correct Answer	A

Q.No: 16	The phenomenon 'Weld decay' is associated with
A	Brass
B	Bronze
C	Cast iron
D	Stainless steel
Correct Answer	D

Q.No: 17	The cold chisels are made by
A	Drawing
B	Forging
C	Piercing
D	Rolling
Correct Answer	B

Q.No: 18	The term 'Hot tear' is associated with
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A	Weathering of non-ferrous materials
B	Process of fabrication
C	Process of heat treatment
D	None of these is correct
Correct Answer	D

Q.No: 19	In agricultural tractors, the vibration level is in the range of Hz.
A	0 - 2
B	2 - 8
C	8 - 20
D	More than 20
Correct Answer	B

Q.No: 20	The safe level of noise for human being ranges between db.
A	100 - 110
B	90 - 100
C	80 - 90
D	70 - 80
Correct Answer	B

Q.No: 21	In proper seat suspension design, the transmissibility should be
A	less than unity
B	between 1 and 2
C	more than 2
D	None of these is correct
Correct Answer	A

Q.No: 22	The temperature range of°C is most practical comfort zone for a human operator.
A	5 to 10
B	10 to 20
C	20 to 30
D	More than 30
Correct Answer	C

Q.No: 23	The green house structures in India are usually designed to withstand wind speeds of km/h and wind pressure of kg/sq.m.
A	50 and 50
B	50 and 110
C	110 and 50
D	110 and 110
Correct Answer	C

Q.No: 24	The rate of air movement should range between cum/h/sq.m. of green house floor area in Horizontal Air Flow (HAF) cooling system.
A	more than 90
B	72 to 90
C	54 to 72
D	36 to 54
Correct Answer	D

Q.No: 25 gas is present in biogas in larger proportion.
A	Acetylene
B	Carbon monoxide
C	Ethylene
D	Methane
Correct Answer	D

Q.No: 26	On an average sunny days in India, the solar collector having area of 1 Sq.m. can provide litre of hot water at about 60°C.
A	75
B	100
C	125
D	150
Correct Answer	B

Q.No: 27	The solar energy is converted into by the solar cells in solar panel.
A	Chemical energy
B	Electrical energy
C	Mechanical energy
D	None of these is correct
Correct Answer	B

Answer	
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Q.No: 28	The minimum wind speed required for working of a wind mill is kmph.
A	40
B	30
C	20
D	10
Correct Answer	D

Q.No: 29	Biomass can be converted into
A	Liquid fuel
B	Hydrogen
C	Producer gas
D	All options are correct
Correct Answer	D

Q.No: 30	Detachment of soil particle from parent material by the beating action of rain drop is
A	Rill erosion
B	Sheet erosion
C	Splash erosion
D	Gully erosion
Correct Answer	C

Q.No: 31	Froude number is the ratio of
A	Gravitational force to viscous force
B	Inertial force to viscous force
C	Viscous force to gravitational force
D	Inertial force to gravitational force
Correct Answer	D

Q.No: 32	The imaginary line drawn through the earthen embankment to separate the zone having hydrostatic pressure and zone having no hydrostatic pressure is known as.
A	Isocline
B	Isobar
C	Phreatic line

D	None of these is correct
Correct Answer	C

Q.No: 33	In clay soils the particle detachment is less as compared to sandy soils because
A	sandy soils have more cohesive force than clay soils
B	sandy soil particles are larger in size than clay soil particles
C	clay soils have more cohesive force than sandy soils
D	None of these is correct
Correct Answer	C

Q.No: 34	Soil erosion will be more from the land-whose surface is
A	covered by forest
B	covered by thick bushy growth
C	covered by grass
D	covered by cultivated crop
Correct Answer	D

Q.No: 35	A watershed can be termed as small watershed when
A	base flow from it is major contributor
B	overland flow is major contributor
C	channel network plays important role in flow of runoff
D	None of these is correct
Correct Answer	B

Q.No: 36	The ratio of sum of length of all channel segments of all orders in a watershed to the area of watershed is known as
A	Constant for channel maintenance
B	Bifurcation ratio
C	Stream length ratio
D	Drainage density
Correct Answer	D

Q.No: 37	The graphical representation of stream discharge against percentage of time the flow is equaled or exceeded is called as
A	Hydrograph

B	Hyetograph
C	Flow duration curve
D	Double mass curve
Correct Answer	C

Q.No: 38	A triangular direct runoff hydrograph due to a storm over watershed has peak flow of 20 cumec occurring at 10 hours from beginning of storm. The time base is 40 hours. If the area of watershed is 72 sq.km., what will be the effective rainfall from the watershed.
A	4 cm
B	0.04 cm
C	2 cm
D	None of these is correct
Correct Answer	C

Q.No: 39	Considering the standard curve number method, what should be the minimum curve number to just initiate runoff from precipitation of 40 mm.
A	0
B	55.95
C	65.25
D	100.00
Correct Answer	B

Q.No: 40	The peak of dimensionless unit, hydrograph is given by the coordinates
A	(0,0)
B	(0,1)
C	(1,1)
D	None of these is correct
Correct Answer	C

Q.No: 41	Remote sensing and GIS techniques can be employed for purposes.
A	improvement of natural resources management
B	land use planning according to capability
C	planning of watershed development work
D	All options are correct
Correct Answer	D

Q.No: 42	Ratio of area of watershed to the area of circle having perimeter equal to perimeter of watershed is known as
A	Compactness coefficient
B	Elongation ratio
C	Circularity ratio
D	Shape Index
Correct Answer	C

Q.No: 43	Which option about the statements made below is correct ? (1) Monitoring and evaluation of watershed is one and the same. (2) Monitoring is done internally, whereas evaluation is done by some external agency.
A	Statement (1) is true, but statement (2) is false
B	Statement (2) is true, but statement (1) is false
C	Both statements (1) and (2) are true
D	Both statements (1) and (2) are false.
Correct Answer	B

Q.No: 44	Which option about the statements made below is correct ? (1) People's participation in watershed development programme is extremely essential. (2) People's participation in watershed development programme can be ensured by educating them through field trip to successful watershed development project.
A	Statement (1) is true, but statement (2) is false
B	Statement (2) is true, but statement (1) is false
C	Both statements (1) and (2) are true
D	Both statements (1) and (2) are false.
Correct Answer	C

Q.No: 45	If a forest watershed is converted to urban watershed which of the option about statements made below will be correct ? (1) Time to peak and time base of hydrograph will be reduced. (2) Peak flow will increase.
A	Statement (1) is true, but statement (2) is false
B	Statement (2) is true, but statement (1) is false
C	Both statements (1) and (2) are true
D	Both statements (1) and (2) are false.
Correct Answer	C

Q.No: 46	Concentric closed contours with elevations increasing inwards represent a
A	depression

B	reservoir
C	hill
D	None of these is correct
Correct Answer	C

Q.No: 47 is used for measurement of evapotranspiration.
A	Blaney-Criddle method
B	Lysimeter
C	Penman - Monteith method
D	All options are correct
Correct Answer	B

Q.No: 48	Sprinkler irrigation system's performance is considered satisfactory, if the uniformity coefficient is equal to or more than
A	55 %
B	65 %
C	75 %
D	85 %
Correct Answer	D

Q.No: 49	What can be said about the water content of same soil sample when subjected to 1/3 bar and 15 bar in a pressure plate apparatus?
A	Water content will be more at 1/3 bar pressure
B	Water content will be more at 15 bar pressure
C	There would not be any difference in water content
D	Can not say from given data
Correct Answer	A

Q.No: 50	The shape of most efficient cross section of an open channel considering the hydraulic efficiency is
A	Rectangular
B	Trapezoidal
C	Parabolic
D	Semicircular
Correct Answer	D

Q.No: 51	An indigenous water lifting device has the discharge of 4 lps. During a day of 8 hours 0.2 ha area is irrigated by this device. What is the average depth of water applied?
A	57.6 cm
B	5.76 cm
C	0.576 cm
D	None of these is correct
Correct Answer	B

Q.No: 52	In order to determine moisture content of soil at permanent wilting point in the field which of the following crop is sown as indicator crop?
A	Safflower
B	Sunflower
C	Alfalfa
D	None of these is correct
Correct Answer	B

Q.No: 53	$q = k i a$ is mathematical representation of
A	Theis law
B	Dupuit's law
C	Darcy's law
D	Kirchoff's law
Correct Answer	C

Q.No: 54	The dimensions of transmissibility of an aquifer are
A	LT^{-1}
B	L^2T^{-1}
C	L^3T^{-1}
D	None of these is correct
Correct Answer	B

Q.No: 55	Gravel packing in a tube well is a thin layer of
A	coarse material
B	coarse material with concrete
C	fine material
D	None of these is correct
Correct Answer	A

Q.No: 56	Which of the option is correct about the statements made below? (1) Submersible pump is placed under water. (2) Submersible pump can give high discharge at high head.
A	Statement (1) is true, but statement (2) is false.
B	Statement (2) is true, but statement (1) is false.
C	Both statements (1) and (2) are true.
D	Both Statements (1) and (2) are false.
Correct Answer	C

Q.No: 57	Specific speed of a pump expresses relationship between
A	pump speed and total head
B	pump speed and pump discharge
C	pump speed, pump discharge and total head
D	pump discharge, total head and efficiency
Correct Answer	C

Q.No: 58	A field of 120 ha is drained by drainage channel. The discharge of drainage channel is $0.1 \text{ m}^3/\text{s}$. What is the drainage coefficient?
A	0.0072 cm
B	0.072 cm
C	0.72 cm
D	7.2 cm
Correct Answer	C

Q.No: 59	Alkaline soils are better reclaimed by
A	providing sub surface drainage
B	addition of sodium salts to soil
C	addition of gypsum to soil and leaching
D	addition of gypsum to soil
Correct Answer	C

Q.No: 60	The drain spacing for steady state drainage is decided by using equation.
A	Ernst's
B	Hooghoudt's
C	Schilfgoarde's

D	None of these is correct
Correct Answer	B

Q.No: 61	In which of the following types of soils, mole drainage is best suited?
A	Sandy soil
B	Silty soil
C	Clayey soil
D	Loamy soil
Correct Answer	C

Q.No: 62	A soil having EC more than 4 dS/m and ESP more than 15 is termed as
A	Sodic soil
B	Saline soil
C	Saline sodic soil
D	Normal soil
Correct Answer	C

Q.No: 63 is the component of drip irrigation system, which requires major cost.
A	Drippers
B	Pumping system
C	Filtering system
D	Laterals
Correct Answer	D

Q.No: 64	The drip irrigation system is designed by considering per cent variation in pressure in lateral.
A	1
B	5
C	10
D	20
Correct Answer	C

Q.No: 65	The emitter discharge in drip irrigation system is decided based on
A	water holding capacity of soil
B	evapotranspiration demand of crop

C	discharge capacity of pumping system
D	infiltration capacity of soil
Correct Answer	D

Q.No: 66	In India sprinkler system is most commonly used.
A	Central Pivot
B	Portable
C	Permanent
D	Raingun
Correct Answer	B

Q.No: 67	Drip irrigation system gives better yields of crops because
A	it is costly.
B	it operates at low pressure.
C	it provides nearby equal water to entire filed at shorter interval.
D	it was invented in Israel.
Correct Answer	C

Q.No: 68	Sprinkler irrigation method can be used for almost all crops except
A	Cotton and tobacco
B	Paddy and cotton
C	Paddy and jute
D	Tobacco and jute
Correct Answer	C

Q.No: 69	Firing order of four stroke four cylinder engine is
A	1-2-3-4
B	1-4-3-2
C	1-3-4-2
D	1-3-2-4
Correct Answer	C

Q.No: 70 is the implement recommended to break hard pan at some depth in soil.
A	M B plough

B	Disc harrow
C	Rotavator
D	Subsoiler
Correct Answer	D

Q.No: 71	A small ribbon like furrow slice directly in front of main plough bottom is turned over by
A	Coulter
B	Furrow wheel
C	Jointer
D	Land side
Correct Answer	C

Q.No: 72	A hunting governor is
A	less sensitive
B	more sensitive
C	more stable
D	None of these is correct
Correct Answer	B

Q.No: 73	A bullock exerts average force equal to of its body weight.
A	one tenth
B	half
C	one fourth
D	None of these is correct
Correct Answer	A

Q.No: 74	Specific fuel consumption of petrol engine is specific fuel consumption of diesel engine
A	lesser than
B	more than
C	equal to
D	None of these is correct
Correct Answer	B

Q.No: 75	Which option about the statements made below is correct? (1) The cooling system maintains engine temperature at 71 to 82°C for petrol engines.
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	(2) The thermostat valve begins to open at about 60°C and opens widely at about 71°C.
A	Statement (1) is true, but statement (2) is false.
B	Statement (2) is true, but statement (1) is false.
C	Both statements (1) and (2) are true.
D	Both Statements (1) and (2) are false.
Correct Answer	A

Q.No: 76	A 2.5 m wide combine is operating at a speed of 4 kmph. The combine operates for 8 hours in a day. How much area will be harvested considering overall efficiency of 60 per cent?
A	0.48 ha
B	4.8 ha
C	8 ha
D	None of these is correct
Correct Answer	B

Q.No: 77	Loop type threshing cylinders are generally used in
A	Groundnut threshers
B	Maize threshers
C	Paddy threshers
D	Wheat threshers
Correct Answer	C

Q.No: 78	Shifting the centre of gravity of a tractor towards its front wheel may create the problem of
A	instability
B	overturning
C	steering
D	None of these is correct
Correct Answer	C

Q.No: 79	Pneumatic wheels have the advantage of over steel wheels.
A	less fuel consumption
B	less power required for same load
C	decreased rolling resistance
D	None of these is correct
Correct Answer	C

Q.No: 80	A point which lies at a distance of $3/4^{\text{th}}$ size of plough from share wing, where the resultant of horizontal and vertical forces acts is known as
A	centre of resistance
B	centre of power
C	centre of pull
D	None of these is correct
Correct Answer	A

Q.No: 81	A seed drill having 1.2 m width operates at 4 kmph for 8 hours. If the field efficiency is 80% what would be the effective field capacity?
A	4.35 ha
B	3.072 ha
C	3.84 ha
D	None of these is correct
Correct Answer	B

Q.No: 82	If the moisture content at dry basis is 17.67%, the moisture content on wet basis is
A	21.46%
B	17.67%
C	15.02%
D	None of these is correct
Correct Answer	C

Q.No: 83	Removal of moisture from any product to bone dry level is called as
A	drying
B	evaporation
C	dehydration
D	None of these is correct
Correct Answer	C

Q.No: 84	The temperature to which air and its water vapour must be cooled till saturation at constant humidity is known as
A	dry bulb temperature
B	wet bulb temperature
C	dew point temperature

D	ambient temperature
Correct Answer	B

Q.No: 85	Unit of specific heat in MKS system is
A	Kcal/kg-°C
B	Kcal/kg-m-°C
C	Kcal/kg
D	Kcal/m-°C
Correct Answer	A

Q.No: 86	The design and development of cleaning and grading machinery is done considering which of the following important physical property of material?
A	Porosity
B	Size
C	Specific gravity
D	True density
Correct Answer	C

Q.No: 87	True density of granular material can be determined by
A	Standard charts
B	Pycnometer
C	Water displacement
D	None of these is correct
Correct Answer	B

Q.No: 88	When rate of moisture loss from a product to the surrounding is equal to rate of moisture gain by the product from surrounding then the product is in with surrounding atmosphere.
A	inequilibrium
B	equilibrium
C	tune
D	None of these is correct
Correct Answer	B

Q.No: 89	The relation $1-RH=e^{-CT} Me^n$ for equilibrium moisture content was suggested by
A	Dalton

B	Bond
C	Henderson
D	Rittinger
Correct Answer	C

Q.No: 90	As compared to pure water the freezing point of water solution will be
A	same
B	lower
C	higher
D	None of these is correct
Correct Answer	B

Q.No: 91	The latent heat of vapourization of water is
A	55 Kcal
B	540 Kcal
C	55 cal
D	540 cal
Correct Answer	B

Q.No: 92	The air velocity at which a particle remains suspended in a long vertical pipe is known as of the particle.
A	Drag coefficient
B	Critical velocity
C	Specific velocity
D	Terminal velocity
Correct Answer	D

Q.No: 93	Hull and germ are removed during the operation of cereals.
A	Hulling
B	Milling
C	Cutting
D	None of these is correct
Correct Answer	B

Q.No: 94 is the unit of thermal conductivity in SI system.
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A	J/°C
B	J/s-°C
C	J/s-m
D	J/s-m-°C
Correct Answer	D

Q.No: 95	Food spoilage occurs due to
A	Bacteria
B	Fungi
C	Yeast
D	All options are correct
Correct Answer	D

Q.No: 96	Inverse quality of toughness is known as
A	Brittleness
B	Friability
C	Malleability
D	None of these is correct
Correct Answer	B

Q.No: 97	Cutting, Crushing, Compressing are the methods used for
A	Agricultural Process Engineering
B	Drying
C	Size reduction
D	Slicing
Correct Answer	C

Q.No: 98	In order to separate, fluidized bed separator is used.
A	heavier seeds
B	medium seeds
C	lighter seeds
D	all seeds
Correct Answer	C

Q.No: 99	In batch type dryers, the air temperature is usually kept at
A	20°C
B	45°C
C	55°C
D	60°C
Correct Answer	B

Q.No: 100	Crushing law was proposed by
A	Bond
B	Kick
C	Rittinger
D	Stokes
Correct Answer	C


10.10.15

(डॉ. आर.आर. कान्हेरे)
परीक्षा नियंत्रक
म0प्र0 लोक सेवा आयोग, इन्दौर